

The Resource Curse

The Political and Economic Challenges of Natural Resource Wealth

KEY MESSAGES

- The term resource curse encompasses the significant social, economic and political challenges that are unique to countries rich in oil, gas and minerals.
- Many oil-, gas- and mineral-rich countries have failed to reach their full potential as a result of their natural resource wealth. In general, they are also more authoritarian, more prone to conflict, and less economically stable than countries without these resources.
- While there are many challenges unique to oil, mining and gas extraction, governments can make policy decisions that help avoid some of the negative consequences of extraction and maximize the benefits.

“Countries with non-renewable resource wealth face both an opportunity and a challenge. When used well, these resources can create greater prosperity for current and future generations; used poorly, or squandered, they can cause economic instability, social conflict, and lasting environmental damage.”

– Natural Resource Charter, Introduction

WHAT IS THE RESOURCE CURSE?

The *resource curse* (also known as the *paradox of plenty*) refers to the failure of many resource-rich countries to benefit fully from their natural resource wealth, and for governments in these countries to respond effectively to public welfare needs. While one might expect to see better development outcomes after countries discover natural resources, resource-rich countries tend to have higher rates of conflict and authoritarianism, and lower rates of economic stability and economic growth, compared to their non-resource-rich neighbors. This reader describes political and economy theories about why some resource rich countries do not do as well as expected.

CAUSES AND EFFECTS OF THE RESOURCE CURSE

Political scientists and economists argue that oil, mineral and gas wealth is distinct from other types of wealth because of its large upfront costs, long production timeline, site-specific nature, scale (sometimes referred to as large *rents*), price and production volatility, non-renewable nature, and the secrecy of the industry. Below are some of the leading observations and theories about how these special characteristics of natural resource revenues create additional challenges for countries:

This reader is intended for use in conjunction with the Natural Resource Charter.

No Resources



Figure 1. Oversight incentives in resource-rich and resource-poor countries.

Source: NRGi

Resource-Rich



- Democracy:** Natural resource wealth, particularly oil wealth, has made it more likely for governments to become or remain authoritarian over the past 30 years. The explanation for this lies in taxation. In general, political scientists find that governments are more responsive to their citizens and are more likely to transition to democracy when government spending is reliant on citizen taxation. When countries collect large revenues from natural resources, they are less dependent on levying taxes on citizens, and thus citizens feel less invested in the national budget. Politicians and government officials are also less directly tied to citizen requests or demands. Further, when resource revenues are secret, citizens do not have a clear sense of whether the resource revenues are being spent well or not. Those who outline this theory suggest that the tendency toward authoritarianism can be mitigated by increasing transparency of revenues and strengthening the links between government and citizens through citizen participation in budgeting or direct distribution of wealth (e.g., cash transfers).
- Conflict:** Natural resources can, and often do, provoke and sustain internal conflicts as different groups fight for control of the resources or use natural resources to finance their fighting. Since 1990, oil-producing countries have been twice as likely to have a civil war compared with non-oil-producing countries. Political scientists point to examples of the Democratic Republic of the Congo, the Niger Delta, Iraq, Libya and Angola to illustrate this tendency. *Petro-aggression*, the tendency of oil-rich states to instigate or be targets of international conflict, has been observed in some cases, such as with Iraq’s invasion of Iran and Kuwait, but researchers debate whether the data supports the conclusion that resource-rich countries do this at a greater rate than non-resource-rich countries.
- Inefficient spending and borrowing:** The amount that governments collect in resource revenues can change drastically from year to year because of changes in commodities prices and production. Several studies have shown that it is very difficult to effectively spend fluctuating and unpredictable revenues. Governments often get trapped in boom-bust cycles where they spend on legacy projects, such as airports and monuments, when revenues are rising and then must make painful cuts when revenues decline. Resource-rich governments have a tendency to

“Resource-rich governments have a tendency to overspend on government salaries, inefficient fuel subsidies and large monuments and to underspend on health, education and other social services.”

over-spend on government salaries, inefficient fuel subsidies and large monuments and to underspend on health, education and other social services. In addition, governments often over-borrow because they have improved credit-worthiness when revenues are high. This type of behavior led to debt crises when revenues declined in Mexico, Nigeria and Venezuela in the 1980s. The private sector can be similarly impacted, as it can over-invest in boom times and then experience widespread bankruptcy during busts.

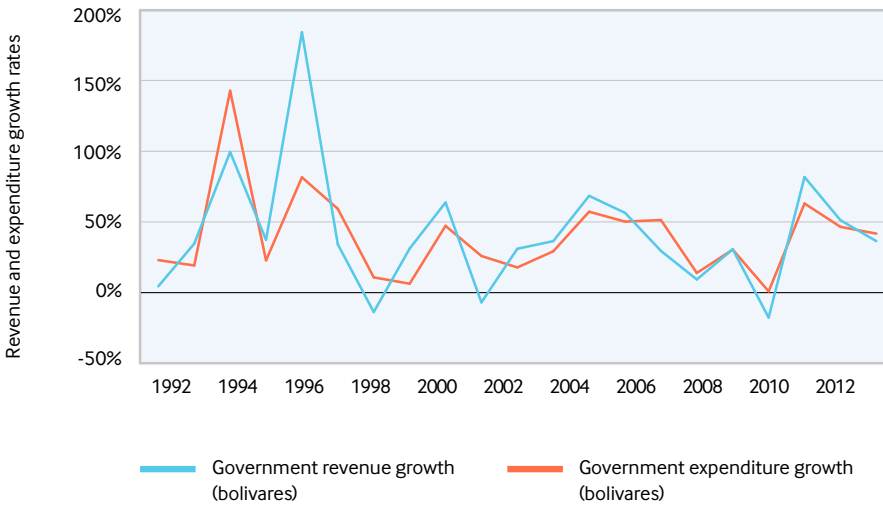


Figure 2. Expenditure volatility in Venezuela follows revenue volatility

- Dutch disease:** A large increase in natural resource revenues can hurt other sectors of the economy, particularly export-based manufacturing, by causing inflation or exchange rate appreciation and shifting labor and capital from the non-resource sector to the resource sector (see revenue management reader). This is known as “Dutch disease.” While inflation and exchange rate appreciation can harm large swathes of the economy over within a few years, their impacts can be felt for decades. The detrimental effect of natural resources on other industries has been well documented in Iran, Russia, Trinidad and Tobago, and Venezuela, all of which have either stunted manufacturing sectors or saw a precipitous decline in manufacturing. These impacts can be minimized if the country has the *absorptive capacity* to transform resource revenue inflows into tangible investments, such as roads and electricity; the government uses resource revenues to make investments in the economy that generate non-resource sector growth; or the government places a portion of its resource revenues in foreign assets. Over the last 25 years, Chile, Indonesia, Norway and the UAE have largely managed to overcome Dutch disease.

“A large increase in natural resource revenues can hurt other sectors of the economy by causing inflation or exchange rate appreciation and shifting labor and capital from the non-resource sector to the resource sector.”

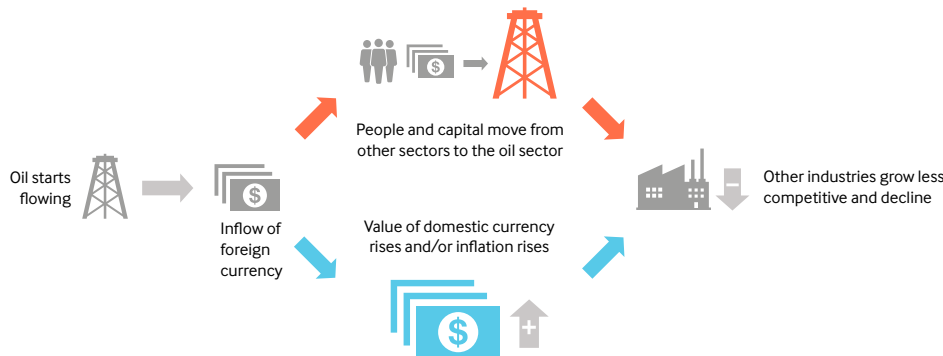


Figure 3. Dutch disease

- **Patriarchy and gender-based challenges:** Natural resource wealth seems to disproportionately impact women. Recent research indicates that oil-rich countries tend to have fewer women in the workforce and a smaller representation of women in government. One explanation for this is that industries that are usually easier for women to enter, such as export-oriented manufacturing, are less likely to succeed in resource-rich countries because of Dutch disease. In addition, studies have shown that women in resource-rich regions often have higher rates of HIV/AIDS and other life-threatening diseases. The large influx of men to communities surrounding a mine has also been associated with an increase in rates of gender-based violence. This trend is particularly concerning as study after study shows that gender reforms are key to lasting poverty reduction. To address this, researchers suggest countries take steps to protect manufacturing through avoiding Dutch disease and that governments surrounding resource-rich areas include gender perspectives in their development plans.
- **Limited government capture of benefits:** In some cases, only a small share of the production value of the resource stays in the country. One explanation is that many *fiscal regimes*, rules about how to split the profits between companies and governments, fail to compensate the state and communities for depleting their resources and related environmental damage or loss of livelihood. These bad deals can happen when countries are so eager to encourage resource extraction that they lower the rates for taxes and royalties without understanding the true value of their resources. In Argentina, Canada, the United States and South Africa, the average effective tax rate (AETR) on many oil projects is less than 50 percent, and in Cameroon, DRC, Peru and the Philippines, the AETR on many mining project is less than 40 percent. In comparison, the AETR on many oil projects in Angola, Libya, Norway and Timor-Leste is more than 70 percent. Also, in capital-intensive (rather than labor-intensive) extractive industries, few non-tax benefits, such as jobs, accrue to locals. While expectations for *local content*, that is employment, local business development and improved workforce skills, are often very high, the actual number of opportunities may be few. The industry has a very low employment rate relative to the size of investments and those jobs, and the machinery required to implement them, mostly imported from abroad, tends to be extremely specialized.
- **Weaker institutional development:** Some researchers argue that institutions are weaker in resource-rich countries because it is easy for elites to capture or take large sums of cash. The theory suggests that large single-point sources of revenue, such as an oil project, can be managed outside the normal budget process and are relatively easily captured by powerful elites. Examples of tools used to capture revenues include sovereign wealth funds, national oil companies and contractors for extractive operations. As such, elites in natural resource-rich countries are less likely to invest in productive enterprises, such as job-creating manufacturing industries, and instead pursue *rent-seeking*, that is, fight for control of these resources. In some cases, politicians or government officials have also purposefully dismantled societal checks or created new regulations to get access to these resources or to provide access to friends or family, a process nicknamed *rent-seizing*. Some argue that elite focus on rent-seeking and rent-seizing promotes corruption and is damaging to institutional development. In turn, the theory suggests that countries with elite rent-seekers and rent-seizers tend to have weaker institutions

“Research indicates that oil-rich countries tend to have fewer women in the workforce and a smaller representation of women in government.”

“Elites in natural resource-rich countries are less likely to invest in productive enterprises, such as job-creating manufacturing industries, and instead pursue rent-seeking, that is, fight for control of resources.”

and lower levels of public service delivery. The data behind this theory is hotly debated, but there are well-documented examples in Afghanistan, Sierra Leone and Tunisia.

- **Social and environmental problems:** The point-source nature of extractive industries often creates challenges when trying to balance the needs of the people and environments that surround the mining area. Sharing and compensating for resources such as land, water and the minerals can create conflict between the extraction companies and the communities. In addition, extraction projects often attract large influxes of people, whether or not additional employment is actually available. This can cause stress on economic, social and cultural relations. Environmental issues include a host of problems, such as dust from mining, scarring of the landscape, noise from process operation, contamination of hydric sources (from waste rock and tailing disposal), massive use of water in the extractive process, gas flaring (causing health problems and wasteful CO₂ emissions) and seismic disturbances. In addition, many of the political and economic problems outlined above constitute or can result in the violation of human rights. The contract between the government and the extraction company could address these issues and clarify whose responsibility it is to manage these impacts.

“Sharing and compensating for resources such as land, water and the minerals can create conflict between the extraction companies and the communities.”

The resource curse is not inevitable, and several countries that have natural resource wealth do not exhibit many of these tendencies. Because of the theoretical connotation of the term, NRCI refers to the many challenges described above as “challenges associated with natural resource extraction” rather than the resource curse. That said, some studies have shown that low-income countries are more vulnerable to resource curse challenges. As there are an increasing number of new discoveries in low-income countries, it is useful for policymakers to be aware of these trends so that they can respond appropriately. The Natural Resource Charter is one tool developed in response to this research to help countries understand the risks and opportunities at various decision points in natural resource governance.

QUESTIONS TO ASK:

- How are natural resource revenues impacting other industries in my country?
- What is the individual tax rate in my country? If individual taxes are low, how are citizens holding the government accountable for resource spending?
- What is the relationship, if any, between resources and conflict in my country? Resources and military spending?
- What is my country doing to respond to the changing prices of minerals and the limited time of production?
- What steps is my government taking to mitigate the environmental impacts of the extractive industry? What steps are companies taking?

ADDITIONAL RESOURCES

Natural Resource Charter (2nd edition, 2014), available at: http://www.resourcegovernance.org/sites/default/files/NRCJ1193_natural_resource_charter_19.6.14.pdf.

Bauer, Andrew, and Juan Carlos Quiroz, *Resource Governance in the Handbook of Global Energy Policy* (ed. Andreas Goldthau, Wiley-Blackwell, 2013).

Humphreys, M., et al, *Introduction in "Escaping the Resource Curse"* (Columbia University Press, 2007).

Ross, Michael, *The Oil Curse* (Princeton UP, 2012).

Van der Ploeg, Rick, *Natural Resources: Curse or Blessing?*, CESifo Working Paper 3125, available at: https://ideas.repec.org/p/ces/ceswps/_3125.html.

The Natural Resource Governance Institute, an independent, non-profit organization, helps people to realize the benefits of their countries' oil, gas and mineral wealth through applied research, and innovative approaches to capacity development, technical advice and advocacy.
Learn more at www.resourcegovernance.org



The Natural Resource Charter Decision Chain

Converting Resources into Development

KEY MESSAGES

- The *decision chain* illustrates the process of converting natural resources into long-term sustainable development, from exploration and discovery to spending the revenues.
- The decision chain differs from the industry value chain in that it focuses on the output of better development as opposed to a more valuable tradable good.
- The Natural Resource Governance Institute (NRGI) and other organizations use the Natural Resource Charter to describe good governance along the decision chain.

THE DECISION CHAIN

The extractive industry decision chain is the set of decisions countries face along the way when trying to convert the natural resources under the ground into better development above the ground. In his book *The Bottom Billion*, Paul Collier popularized this approach to stress the key steps in ensuring that natural resource wealth transforms into citizen well-being. This framework has since become a reference for other organizations working on natural resource governance, such as the Natural Resource Governance Institute, the World Bank, and the Extractive Industries Transparency Initiative (EITI). The process begins with the decision of whether to extract and includes the questions of how to allocate rights to extract, how to generate revenues and other benefits, and how to manage the revenue from extraction. The motivation for outlining these decisions is that many resource-rich countries have trouble realizing the full development potential of their resource wealth. Articulating the decisions helps governments and oversight actors understand where they can effect change.

“For countries to benefit from resource wealth, citizens and their governments must make a broad range of decisions. Each decision requires governments to consider complex options and trade-offs and devise strategies to implement these policy choices.”

– Natural Resource Charter, Introduction

Decision chain and value chain

Many in the extractive industries refer to a value chain where each link represents addition value added to the commodity. The image below shows the example of petroleum on the way from the extraction site to the end user. The major difference between this value chain and the Natural Resource Charter decision-making chain is that the decision-making chain looks at natural resources as a national asset that is being transformed through these decisions into a better development outcome. The industry value chain looks at natural resources as commodities that are transformed into more valuable forms of tradable goods.

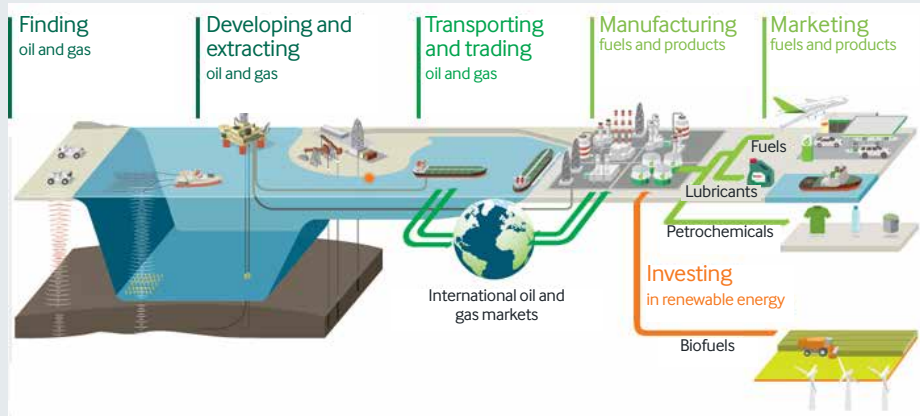


Figure 1. Oil value chain describing BP’s business model.

Source: BP value chain image, available at: <http://www.bp.com/en/global/corporate/about-bp/company-information/our-business-model.html>

THE NATURAL RESOURCE CHARTER PRECEPTS

The Natural Resource Charter, produced by NRCGI, offers 12 steps (or precepts) of guidance along the decision chain at the national level. It provides norms or good practices for how to optimize these decision-making processes and decisions to have the best chance to foster better development.

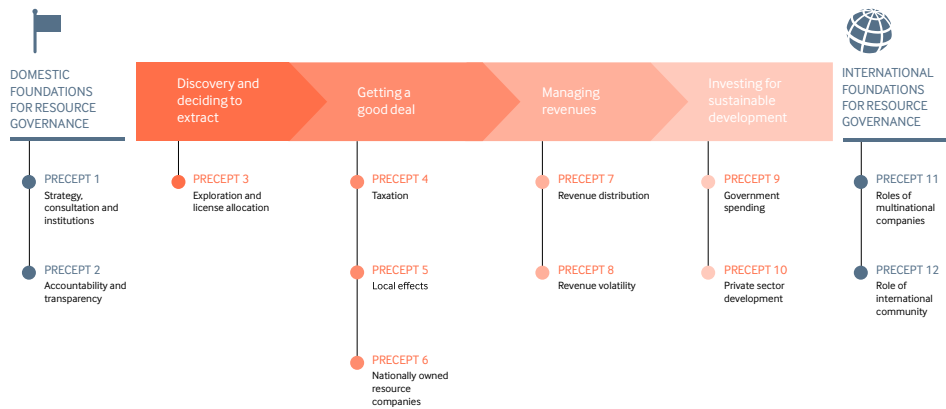


Figure 2. The Natural Resource Charter

Source: The Natural Resource Charter, available at: http://resourcegovernance.org/sites/default/files/NRC1193_natural_resource_charter_19.6.14.pdf

The precepts of the charter are separated into three groups: 1) domestic foundation for resource governance; 2) the chain of economic decisions required to manage resources for prosperity; and 3) the international foundations of good governance.

The charter emphasizes that a decision chain is only as strong as its weakest link. If a country has good systems in place for deciding to extract or for downstream revenue management but poor revenue collection systems, its ability to draw real benefit from extraction will be limited. Therefore, the chain should be viewed as a holistic system.

Some countries, such as Nigeria, Sierra Leone and Tanzania, are using the charter to evaluate their decision-making processes and learn where they can improve their governance. This benchmarking process is time-consuming and requires strong political will. Once it is completed, however, the government can create a relevant action plan for how to improve resource governance. For more information, see the reader on the measurement and assessment of natural resource governance.

NRC PRECEPTS

There are 12 charter precepts, with each precept covering key policy questions. These are captured in the table below.

Charter precept	Primary questions covered by the precept
<p>Precept 1. Resource management should secure the greatest benefit for citizens through an inclusive and comprehensive national strategy, clear legal framework and competent institutions.</p>	<p>1.1 Strategy and coordination. Does government use a comprehensive, coordinated and long-term strategy to guide extractive resource management?</p> <p>1.2 Legal and institutional framework. Is the legal and institutional framework sufficiently developed to govern extractive resources?</p>
<p>Precept 2. Resource governance requires decision makers to be accountable to an informed public.</p>	<p>2.1 Transparency and availability of information. Is there sufficient transparency and availability of information on the management of natural resources to hold officials from the government, private sector and civil society to account?</p> <p>2.2 Official oversight. Are official oversight bodies able to hold officials involved in the management of natural resources to account?</p> <p>2.3 Informed public. Is the public able to hold the government to account for the management of natural resources?</p>
<p>Precept 3. The government should encourage efficient exploration and production operations, and allocate rights transparently.</p>	<p>3.1 Geological information. Does government manage geological information in a way that enhances competition and improves its negotiating position?</p> <p>3.2 Deciding to explore. Where the government has decided to allow exploration and production, is this in line with local and national priorities?</p> <p>3.3 Choosing companies. Does the government allocate rights to the most financially and technically competent companies?</p> <p>3.4 Development plans. Does the government ensure that development plans are consistent with the local and national priorities?</p>
<p>Precept 4. Tax regimes and contractual terms should enable the government to realize the full value of its resources consistent with attracting necessary investment, and should be robust to changing circumstances.</p>	<p>4.1 Setting taxes. Has the government established fiscal terms that apportion risks and returns from extractive projects and secure optimal value for the country in the long term?</p> <p>4.2 Collecting taxes. Do authorities collect taxes and other payments owed to them?</p> <p>4.3 Fiscal accountability. Is the government held to account for setting and collecting taxes and other payments?</p>

<p>Precept 5. The government should pursue opportunities for local benefits and account for, mitigate and offset the environmental and social costs of resource extraction projects.</p>	<p>5.1 Risk identification. Does government work with local communities to identify the environmental and social risks associated with extraction?</p> <p>5.2 Environment and social protection. Does government protect the environment and local communities from potentially harmful effects of resource extraction?</p> <p>5.3 Compensation and national benefits. Does government provide reasonable compensation and/or participation in national benefits for affected communities?</p> <p>5.4 Local benefits. Does the government help local communities benefit from resource extraction?</p> <p>5.5 Artisanal and small scale mining. Does the government manage the artisanal and small scale mining sector in a way that is compatible with both national and local priorities?</p>
<p>Precept 6. Nationally owned companies should be accountable, with well-defined mandates and an objective of commercial efficiency.</p>	<p>6.1 State owned enterprises’ role. Do the extractive sector state-owned enterprises have clearly defined roles? Are these roles followed in practice?</p> <p>6.2 State owned enterprises’ funding and financing. Do the extractive sector state-owned enterprises have appropriate funding and financing models?</p> <p>6.3 Political interference. Are there constraints on political interference in extractive sector state-owned enterprises’ technical decisions?</p> <p>6.4 State owned enterprises’ accountability. Are extractive sector state-owned enterprises transparent and subject to oversight?</p>
<p>Precept 7. The government should invest revenues to achieve optimal and equitable outcomes, for current and future generations.</p>	<p>7.1 Consume or Invest. Is the country targeting the right balance between consumption and investment?</p> <p>7.2 Balanced budget. Does the government save a part of its resource revenues?</p> <p>7.3 Saving vs. domestic investment. Does the governments adequately manage the rate at which surplus funds are spent in the domestic economy vs. abroad?</p> <p>7.4 Domestic distribution of resource revenues. Does the government distribute and spend revenue in an efficient and equitable manner?</p>
<p>Precept 8. The government should smooth domestic spending of revenues to account for revenue volatility.</p>	<p>8.1 Volatility management performance. Is the government managing resource revenue volatility effectively?</p> <p>8.2 Fiscal rule. Does the government use a suitable fiscal rule?</p> <p>8.3 Savings Fund. If a saving fund is used, is it well designed and governed?</p> <p>8.4 Debt management. Does the government borrow against resource wealth? Is this leading to over-indebtedness?</p>
<p>Precept 9. The government should use revenues as an opportunity to increase the efficiency of public spending at the national and sub-national levels.</p>	<p>9.1 Public financial management systems’ reform. Is the government improving public spending systems to handle future budget increases?</p>

<p>Precept 10. The government should facilitate private sector investments to diversify the economy and to engage in the extractive industry.</p>	<p>10.1 Diversification and Dutch disease. Does the government mitigate Dutch disease impacts of resource extraction and seek to diversify the economy in the long-run?</p> <p>10.2 Economic bottlenecks and absorptive capacity. Has the government ensured that higher public spending will not cause significant inflation and high project costs?</p> <p>10.3 Local content and employment in the extractive sectors. Does the government ensure that local businesses and workers have the opportunity to operate in the extractive sector?</p> <p>10.4 Extractive sector-related infrastructure. Does the government manage the provision of extractive sector-related infrastructure appropriately and explore shared use of this infrastructure?</p> <p>10.5 Domestic use of the commodity. Is domestic supply of the commodity efficient and its price reflective of market fundamentals?</p>
<p>Precept 11. Companies should commit to the highest environmental, social and human rights standards, and to sustainable development.</p>	<p>11.1 Advancing global norms. Do international extractive companies seek to rectify governance deficiencies and adhere to the highest environmental, social and human rights standards?</p>
<p>Precept 12. Governments and international organizations should promote an upward harmonization of standards to support sustainable development.</p>	<p>12.1 Advancing global norms. Does the international community advance global norms to support country level efforts to benefit from resource extraction?</p>

QUESTIONS TO ASK

- Does the decision chain reflect how resources are managed in my country?
- Where is my government strongest? Where is the government weakest ?
- Are reforms underway to address management areas where the government is weak?

ADDITIONAL RESOURCES

Natural Resource Charter, <http://naturalresourcecharter.org>

World Bank, Extractive Industries Value Chain (2009), available at: http://siteresources.worldbank.org/INTOGMC/Resources/ei_for_development_3.pdf

The Natural Resource Governance Institute, an independent, non-profit organization, helps people to realize the benefits of their countries' oil, gas and mineral wealth through applied research, and innovative approaches to capacity development, technical advice and advocacy.
Learn more at www.resourcegovernance.org



The Oil and Gas Industry

Overview and Trends

KEY MESSAGES

- Oil and gas are hydrocarbons formed from the compression of organic material over millions of years.
- The process of getting oil out of the ground and to end-users is divided between *upstream* operations, which include exploration and production, and *downstream* operations, which include refining, marketing, and distribution.
- Nationally owned oil companies are the largest players in the industry.
- New technology has made it profitable to extract oil and gas from new places when prices are high. One of the major new processes is hydraulic fracturing, or *fracking*, which allows companies to extract *shale oil and gas*.

WHAT ARE OIL AND GAS?

This reader covers basic information about oil and gas and the industry that extracts them. It is intended to give a basic understanding to those who aim to promote better use of revenues from oil and gas.

Oil and natural gas are *hydrocarbons*, strings of carbon and hydrogen formed from organic material compressed over millions of years. Generally, oil and natural gas are both referred to as *petroleum*. They are often found together. If a reservoir (area underground) has only gas and no oil, it is called *non-associated gas*. If a reservoir contains both oil and gas, the gas it contains is called *associated gas*.

The oil and gas found in the ground come in different *grades* or qualities. The primary way to describe the quality of oil is in terms of its *sweetness* and *heaviness*. The sweetness of oil refers to the amount of sulfur in the oil. Oil with less sulfur is sweeter and requires less processing before use, and is therefore more valuable. The heaviness of oil refers to its density. Lighter crude can be refined into higher value products, such as the gasoline (or petrol) used by car owners. Heavier crude flows more slowly and has more unwanted chemicals that must be refined out. The American Petroleum Institute (API) has created a degree-based gravity scale that compares the relative density of various crudes. Light crude is measured above 31.1° API while heavy crude measures below 22.3° API.

Refining

What comes out of the ground is not often a form of petroleum that can be used right away. For it to be the fuel that can go into a car or converted into plastics, it must go through a process of refining. Refining is a chemical process of heating and cooling that isolates the chemicals that are most useful in the end product.

This reader is intended for use in conjunction with the Natural Resource Charter.

Natural gas is mostly methane, with some other contaminants. It is also described as either *sweet* or *sour* depending on the amount of hydrogen sulfide in the reservoir. When gas is refined, leaving mostly methane, it is called *dry gas*. Often natural gas is condensed into natural gas liquids, such as propane and butane. The British thermal unit (BTU) is the measure for the energy output of gas. While gas burns cleaner and is considered to have less destructive environmental impact upon use than oil or coal, the challenges associated with storage and transport can make it more expensive.

Reserves of oil are generally measured in tons or barrels of oil. Production quantities are abbreviated using “bbl” (or barrels of oil per day, bbl/d or bpd). One ton is approximately between six and eight barrels of oil. Reserves and production quantities of gas are measured in cubic meters (m³) or standard cubic feet (scf).

HOW DO COMPANIES GET OIL AND GAS OUT OF THE GROUND?

The process of getting oil and gas out of the ground begins with *exploration and appraisal*. Oil and gas are found under the ground in reservoirs that are sealed but connected to other chambers of oil and gas underground. When a reserve of oil is found, the company will often produce a description of the quality of the oil and the estimated amount measured either by volume (barrels) or by weight (tons). The company may also classify some of the contents as *proven reserves*. Proven reserves are oil finds that are considered commercially viable—that is, the company is at least 90 percent certain that it would make money getting petroleum out of the ground and taking it to market. If oil is held in a *probable reserve*, then the company thinks there is at least a 50 percent chance of recovering the oil. *Unprovable* or *possible* reserves are those with a 10 percent to 50 percent probability of profitable extraction. The word *resource* is used to refer to all fields within a country, including those that may not be economically feasible to extract.

Upstream vs. downstream

Upstream and downstream are different parts of the process of getting petroleum from out of the ground and to the market. Upstream includes the exploration and extraction phases. Downstream includes refining, marketing, and end use. Transportation between upstream and downstream is often referred to as midstream.

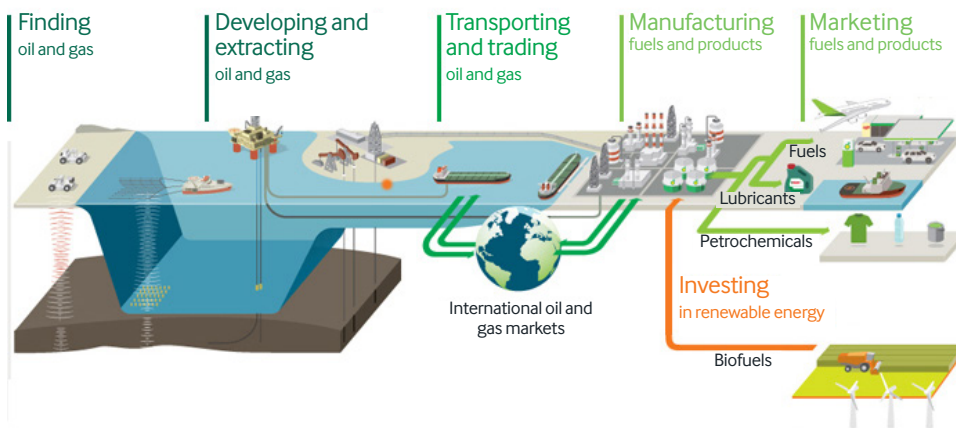


Figure 1. Oil value chain describing BP’s business model.

The oil and gas industry often refers to the concept of a value chain to describe the steps in the process get the oil out of the ground and purchased on the commercial market.

Source: BP value chain image, available at: <http://www.bp.com/en/global/corporate/about-bp/companyinformation/our-business-model.html>

Once the reservoir is deemed commercially viable and the company has been granted legal authorization to tap it, the company will often begin digging test wells. These wells will give more information about viability and can indicate what type of equipment is best for production. *Production*, the next phase after exploration and appraisal, is the process of getting the oil and gas out of the ground. This can occur in three different ways. *Primary* recovery efforts are when the oil will flow to the surface under its own pressure. When water or gas are injected into the reservoir to lift the oil, recovery is considered *secondary*. *Tertiary*, or enhanced, removal happens when chemicals are put

into the well. The production rates of wells vary greatly depending on the geology and technology used. Rates are usually measured in barrels per day. The lifecycle of a typical well will have a build-up period, peak, and then decline.

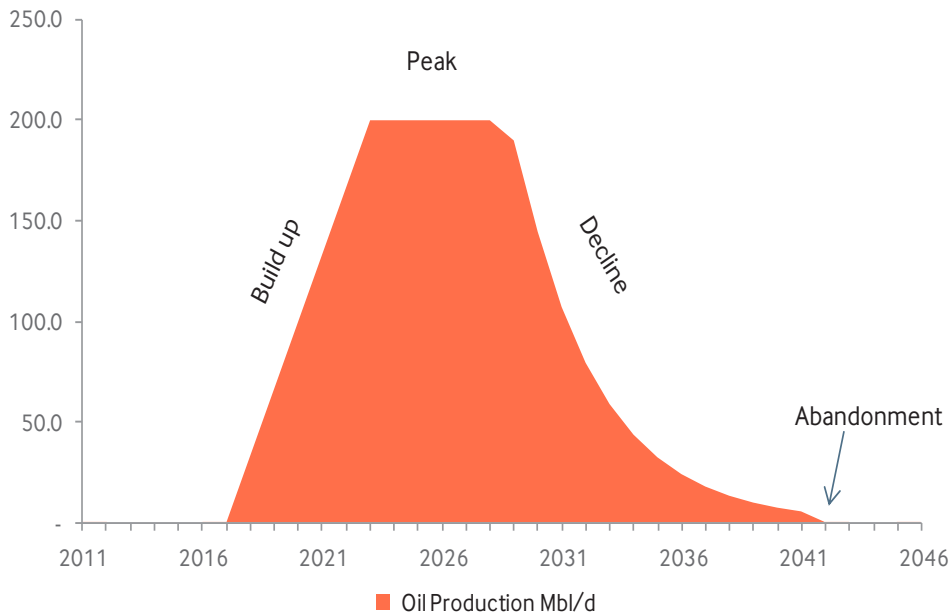


Figure 2: Production profile of a typical oil field

Source: NRGi

The final phase of an oil project is *decommissioning* and *abandonment*. This phase requires closing the reservoir, removing equipment, and restoring the environment to its previous state.

The cost of extraction varies greatly depending on the type of oil and its location. Generally offshore oil is much more costly to extract than onshore oil.

WHO ARE THE KEY PLAYERS IN THE INDUSTRY?

Countries with large reserves of oil and gas have always been very powerful players in the industry. The Organization of Petroleum Exporting Countries (OPEC) formed in 1960 as five countries collaborated to get the best price for their oil. Today, OPEC represents 12 countries, which together control 80 percent of the world’s proven reserves and one-third of production. Often countries make agreements, or contracts, with companies to help extract the oil and bring it to market.

National oil companies (NOCs), oil companies that are primarily or completely owned by the government, are some of the biggest players. Saudi Aramco, for example, is the largest oil company in the world. In addition to being involved in extraction, many national oil companies are also involved in regulation of the industry, commodity trading, and quasi-fiscal expenditures. For more on NOCs, please refer to reader on state participation and state-owned enterprises.

International oil companies are privately owned by shareholders, instead of governments. The six largest *supermajors* companies are ExxonMobil, BP, Royal Dutch Shell, ConocoPhillips, Chevron/Texaco, and Total. These large oil companies cover all aspects of the industry value chain from extraction through distribution. They tend to be risk averse, preferring to engage in projects where there are more established legal

Public energy data

There are a number of websites that publish data about energy. These often include rates of production on a country level. You can access some of these data at the following websites:

- www.eia.gov
- www.bp.com
- www.opec.org
- www.ieg.org

regimes and higher probability of successful extraction. Supermajors own a small share of reserves compared to NOCs, but their profits are still very large, often comparable to the GDPs of many medium-sized countries.

Smaller, multinational companies like Occidental Petroleum and Anadarko Petroleum still have billions of dollars in capital. These tend to be more innovative and develop a technical expertise in one area of extraction, such as deep-water drilling.

Another type of company involved is a *service provider*. These companies supply specialized services for the larger companies, such as rigs, pipes, seismic surveys, and rig operators. Examples include companies like Halliburton and Transocean. Though they are smaller than the supermajors, some are still very large companies. Halliburton, for example, had revenue of \$32.9 billion in 2014 and employs over 75,000 people.

“Supermajors own a small share of reserves compared to NOCs, but their profits are still very large, often comparable to the GDPs of many medium-sized countries.”

WHAT ARE THE MAJOR TRENDS IN THE INDUSTRY?

At the moment, in early 2015, the price of oil is dropping rapidly. Price fluctuations in oil and gas can impact the direction of the industry because costs are different at different extraction points. Shale oil, for example, can be very costly to produce and may become less commercially viable if prices continue to drop. Countries with large production fields and large companies can more easily ride price shocks without having to make drastic changes to their activities.

Shale gas

Shale gas refers to reservoirs of gas that are trapped in rock formations that are less permeable. Removing gas from these formation requires a process called hydraulic fracturing, or *fracking*. Fracking involves pumping a mixture of water, sand and chemicals into a well under high pressure. Shale gas production has become extremely controversial due to its potential social and environmental impacts.

Technological innovations during the years when oil prices were high made *shale oil and gas* more commercially viable to extract. The production of shale hydrocarbons has altered the market structure, and increased the production capacity of the United States, Canada, and Russia. However, the drop in oil prices in 2015 has already led to a downsizing of this industry, especially in the United States.

Amid fluctuating prices, the global demand for energy, including oil and gas, is increasing. While alternative forms of energy are becoming more popular, there are still strong indications that the use and production of oil and gas will continue. Though industrial energy efficiency is increasing, the demand for transportation and increasing population means there is an overall increasing need for energy.

Oil and gas are highly concentrated geographically. As of 2011, the Middle East held 48 percent of the world’s known oil reserves. Improvements in exploration technology and economic stability in Africa have prompted oil and gas companies to begin exploring where they have not looked previously. As a result, since the early 2000s there has been an increase of discoveries throughout Africa.

QUESTIONS TO ASK

- What types of oil and gas are found in my country? How much is available? How much is being produced? When will it be depleted at current production rates?
- Who are the key players in my country?
- How do changes in the price of oil impact production in my country?
- What type of extraction process is used in my country?

ADDITIONAL RESOURCES

Further reading

Christian O.H. Wolf, *Petroleum Sector Value Chain* (World Bank Group 2009), available at : http://siteresources.worldbank.org/INTOGMC/Resources/noc_chapter_1.pdf

Inkpen, Andrew, *The Global Oil & Gas Industry: Management, Strategy and Finance* (2011)

The Natural Resource Governance Institute, an independent, non-profit organization, helps people to realize the benefits of their countries' oil, gas and mineral wealth through applied research, and innovative approaches to capacity development, technical advice and advocacy.
Learn more at www.resourcegovernance.org

The Mining Industry

Overview and Trends

KEY MESSAGES

- Minerals are solid substances, formed through biogeochemical processes, with specific chemical compositions and physical properties.
 - Extracting valuable, desired minerals often involves a process of separating desired minerals from other minerals that are within the same rock or ore.
 - The life cycle of a mine includes many stages that can include a production phase that lasts as long as 100 years.
 - In contrast to the petroleum sector, the largest mining companies are privately held.
-

WHAT ARE MINERALS?

This reader covers basic information about minerals and the industry that extracts them. It is intended to give a basic understanding for those who aim to promote better use of revenues from mineral extraction.

A *mineral* is a solid substance, formed through biogeochemical processes, that has a specific chemical composition and physical properties. There are over 2,500 different types of minerals as diverse as coal, gold, and rubies. A *rock* is a solid composed of different minerals and other substances.

When mining, companies operate processes to extract or take away from the surrounding rock the minerals that they want to commercialize. A rock that contains a commercially profitable quantity of one or more minerals (or metals in particular) is called an *ore*. The left-over, worthless rock material from the ore is called *gangue*. The content of the ore, the cost per unit weight of the extracted mineral, is measured on a scale called the *grade*. Minerals are generally measured in ton, though gemstones are measured in *carats*. (One carat is equal to approximately 200 milligrams.)

Minerals can vary in quality. Coal, for example, ranges from *brown coal*, used for electric power plants, to *anthracite* coal, used for residential space heating. Minerals are also found in varying states of purity. Gold's purity is commonly measured in *karats* (not to be confused with the weight measure of *carats*). Most minerals must be *refined* for their end use. For example, after tantalum is taken out of the ground it often needs to be *chemically refined*, a process that separates the tantalum from other particles that might

This reader is intended for use in conjunction with the Natural Resource Charter.

be found in the same rock, before it is used to create an electrical component that eventually ends up in a mobile phone. Gems, a type of mineral noted for their hardness and beauty, often gain value after extraction through the process of polishing and cutting.

HOW DO MINERS GET MINERALS OUT OF THE GROUND?

The process of getting minerals out of the ground begins with exploration and appraisal. Exploration usually begins with airborne studies and mapping. Even when minerals are below the ground, geologists can gather initial information based on formations and recordings of magnetic fields. Next, geologists conduct seismic analysis during which they use sound waves to get information about the chemical composition and density of rocks.

If this initial information is promising, companies may apply for exploration licenses with which they can conduct further research, usually including some drilling and extraction of core samples. The samples are analyzed to estimate the composition and size of a field. Mineral finds are often classified using three categories: *inferred mineral resources*, when it can be inferred that there are minerals but there is insufficient evidence to be certain; *indicated resources*, when there is reasonable confidence, also called a *probable reserve*; and *measured resources*, when there is a high degree of confidence, also called a *proven reserve*.

Even when a reserve is proven, a company must consider a variety of factors before deciding whether extracting the minerals will generate enough profit to justify the effort. It must determine what type of mine will be required (as explained in the following section); how to separate the waste from the desired minerals, and where to put the waste; how to minimize the social, environmental and economic impact of extraction; and how to get the mineral from the mine site to market. This is often done through a series of *feasibility studies*, which assess the costs of each of these actions.

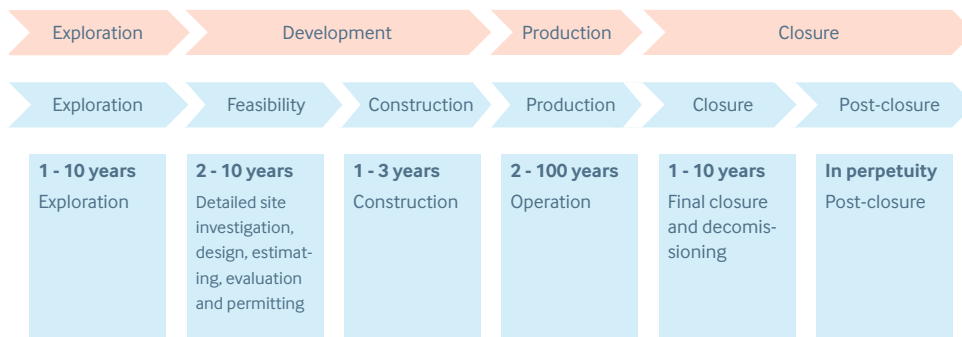


Figure 1. Mine life cycle

Source: NRGi

Once the mineral deposit is deemed commercially viable and the appropriate contracts have been signed, the company will begin the production phase. During this phase, the company extracts the minerals from the ground and often rinses or separates some of the minerals from the ore. Depending on the size of the mine, this phase can last as long as 100 years.

“Depending on the size of the mine, the production phase can last as long as 100 years.”

Last, the extraction company has a responsibility to close the mine. During the *closure and rehabilitation* phase, the company often has to make the area around the mine safe, including securing the waste piles produced by the mine. While this is a very important phase for the community surrounding the mine, it is not a very profitable phase for the company. In order to ensure a thorough and safe closure, the government must carefully create liability for the companies in crafting laws and negotiating contracts.

WHAT TYPES OF MINES ARE THERE?

There are four major types of mining operations:

- **Surface.** Surface mining includes many types of mining during which the ore is all removed from the ground. When there are hard rocks, such as coal and diamonds, companies often use an *open pit*, while *open cast* mining is used for soft rocks, such as limestones. Generally, the terms open-pit, open-cast and open-cut are often used interchangeably. In this process, the minerals are often separated from the other rocks after they are removed from the mining pit. This form of mining often has a large impact on the surface environment both from the extraction site and the nearby waste deposits.
- **Underground.** With underground mining, the surface remains intact and workers and machines remove the minerals through tunnels or shafts. Underground mining begins with a phase of *development mining* whereby rocks are extracted so that miners can get closer to the ore. *Production mining* is when the ore with the desired mineral is extracted. Health and safety of workers is particularly important to successful underground mining, including ensuring a proper ventilation system and stable tunnels.
- **Dredge.** This process occurs when rocks and sediments are removed from the the floor of a body of water. The sediment and ores are sorted and the undesired minerals are returned to the water or deposited elsewhere. Traditionally this type of extraction has taken place in shallow areas, but new technology is taking it to deeper sea locations where there are expectations for high yields. This form of extraction often has a large impact on aquatic life that is very difficult to restore after mining operations are complete.
- **Artisanal.** Artisanal mines can be either on the surface or below the ground but are distinct in that there is no large company overseeing the extraction. Sometimes artisanal mines are completely informal (i.e., they do not possess mining rights) and self-organized, while in other cases there is a small company that owns a license and hires day laborers to extract the minerals. Often those who work at artisanal mines do so on a subsistence basis. Artisanal mining is notable for having fewer protections for health and safety of workers and environmental impact. It is also an area of mining that involves a comparatively large percentage of women and children.



Source: Nautilus Minerals



Source: PenPlusBytes

WHO ARE THE KEY PLAYERS IN THE INDUSTRY?

The mining industry is comprised of a mix of large and small companies. The large international companies, such as BHP Billiton and Vale, are referred to as *majors*. These companies have access to large amounts of capital and are capable of developing a major mine on their own. While there are many large state-owned mining companies, in contrast to the oil and gas sector, the biggest players are mostly privately held international corporations. Some notable exceptions include state-owned enterprises like China's Shenhua, India's Coal India Limited, and Chile's Codelco.

Junior companies tend to focus on exploration. They tend to have significantly less access to capital and rely on project-specific equity financing to fund new operations. A few of them also produce minerals on their own or in collaboration with other companies.

The specialization that mining requires for certain minerals has resulted in different company types and areas of operation. Some, like Rio Tinto, operate throughout the globe. In contrast, Lonmin is a British company that produces only in South Africa. Similarly, some larger companies diversify their portfolios across many different types of minerals while others specialize in extracting one or very few types of product. Freeport, for example, is a large international company that specializes in extracting copper and manufacturing copper products. Freeport also has interests in the gold and hydrocarbons sectors.

The International Council of Mining and Minerals (ICMM), an organization composed mostly of large extraction companies, has an increasing influence on best practices in the industry. Its standards for health and safety, environmental impact, and community consultation are increasingly viewed as a resource for the major companies. The junior companies, who are not members of ICMM, are less likely to be in compliance with these high standards.

Mining Data

Several organizations regularly publish information on mineral deposits and trends.

- **EY** publishes an annual risk assessment of the mineral sector: www.ey.com/GL/en/Industries/Mining---Metals/Business-risks-in-mining-and-metals
- **The US Geological Society** publishes annual overviews of the geology in most countries: www.usgs.gov/
- **BP** publishes an annual assessment of the global energy outlook that includes a detailed assessment on coal mining: www.bp.com

QUESTIONS TO ASK

- What types of minerals are found in my country? How much is available? How much is being produced? When will it be depleted at current production rates?
- Who are the key players in my country?
- How do changes in the price of minerals impact production in my country?
- What type of extraction processes are used in my country?

ADDITIONAL RESOURCES

Further reading

The PWC annual *Mine Series* provide up to date information on mining industry performance and profitability. See for instance, *Mine 2014: Realigning Expectations*, available at: www.pwc.com/gx/en/mining/publications/mine-realigning-expectations.jhtml

International Council on Mining and Metals, *Trends in the mining and metals industry* (Mining's contribution to sustainable development, ICMM, October 2012), available at: www.icmm.com/trends-in-the-mining-and-metals-industry

International Council on Mining and Metals, *The role of mining in national economies* (Mining's contribution to sustainable development, ICMM, October 2014, 2nd edition), available at: www.icmm.com/national-economies

The Natural Resource Governance Institute, an independent, non-profit organization, helps people to realize the benefits of their countries' oil, gas and mineral wealth through applied research, and innovative approaches to capacity development, technical advice and advocacy.
Learn more at www.resourcegovernance.org

Legal Framework

Navigating the Web of Laws and Contracts Governing Extractive Industries

KEY MESSAGES

- The rules, rights and obligations of companies, governments, and citizens are set forth in a system of legal documents called a legal framework.
- Documents in the legal framework include a country's constitution, legislation, policy, regulations and contracts.
- Laws and policy are supposed to have more authority than a contract. However, contracts can also be written to explicitly override the laws and regulations.
- Legal documents that cover broad principles, like constitutions, are generally more difficult to change. More specific documents, like laws and contracts, can often be more easily amended.
- Countries with detailed laws and policies often have more stable and predictable legal frameworks than those that leave more aspects open for negotiation in individual contracts.
- In some countries, national courts resolve scenarios where legal documents conflict or parties have different interpretations about what the documents mean. However, extractive industry contracts often stipulate that any disagreement go to international arbitration.

“The rules, responsibilities and institutions governing the behavior of actors are central to optimal resource management.”

– Natural Resource Charter, Precept 1

LEGAL FRAMEWORK

For each project to extract natural resources from the ground, there are rules that govern the rights and responsibilities of governments, companies, and citizens. Together these rules are called a *legal framework*, or *legal architecture*. Who is involved in making these rules and what documents they use to define them differs from country to country.

The legal framework that governs the extractive industries rests inside a broader set of rules governing the organization of the state and economic activities. A well-designed legal architecture should provide rules for how state institutions are structured; how companies acquire and manage licenses; the fiscal terms governing payments between companies and the state; environmental management; relationships between extractive projects and neighboring communities; the behavior of public officials active in the sector; public information disclosure and accountability; and how the government

This reader is intended for use in conjunction with Precepts 1, 3 and 4 of the Natural Resource Charter.

will manage natural resource revenues. When companies begin to engage in a country, they must check that they are *in compliance*, or following, all of the rules in the legal framework of a country.

Legal frameworks comprise a set of documents that include the constitution, legislation, regulations, and contracts. How these documents relate to one another, which has more force than the other, is often referred to as a *legal hierarchy*, as illustrated in the pyramid below.

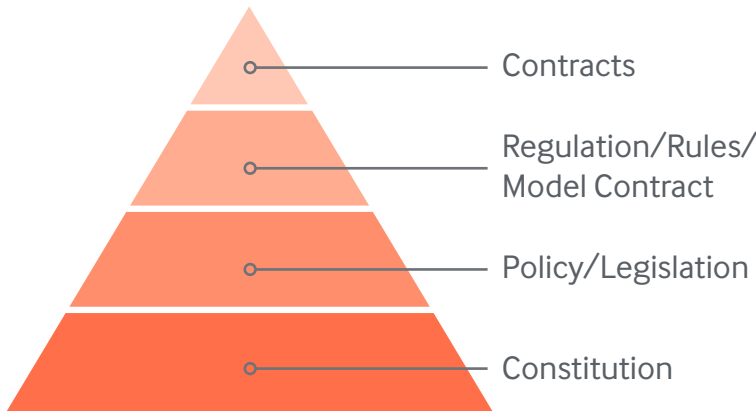


Figure 1. The Legal Hierarchy

Source: NRGi

Moving from the bottom of the pyramid to the top, each instrument becomes increasingly detailed or specific. Each instrument on the pyramid should be consistent with the instruments below it. In a properly ordered legal hierarchy, a country would not agree to terms in a contract that conflict with rules established in regulation, legislation or the constitution. Also, laws and policy are supposed to have more authority than a contract—take precedence, in legal speak. In practice, however, contracts can also be written to explicitly override the laws and regulations.

Constitution. A constitution establishes the basic structure of government and the rights and responsibilities of citizens. It reigns supreme over all other legal instruments in a country. As foundational documents, constitutions are purposefully difficult to modify, with changes frequently requiring some sort of super-majority approval in the legislature or popular referendum.

Many constitutions include information relevant to natural resources, such as the structure of political institutions, checks and balances within the political system, rights to land ownership, environmental protection, civil legal process, and labor standards. Fundamental values concerning natural resource governance, including national ownership of subsoil resources and a commitment by the state to manage these resources in the public interest, are included in some constitutions in resource-rich countries. Most constitutions do not establish specific rules governing the sector. A few countries have included specific provisions on key policy issues, including formulas for resource revenue-sharing (e.g., Nigeria, South Sudan); requirements that parliament approve contracts (Kuwait, Ghana, Tunisia) or that all contracts be made public (Mexico, Niger).

Policy and legislation. National policies and laws should provide a coherent set of strategies and rules to govern behavior in the sector. Many countries draft formal petroleum or mineral sector *policies* to define a core set of principles and goals that will underpin all other rules and activities. Some policies are approved by a national legislature, while others are promulgated by the executive alone. The best-designed policies are developed through a process of broad-based consultation that incorporates stakeholder feedback and provides a clear explanation of public strategy.

Legislation is the legally binding set of rules that govern the vision established in a policy. Most resource-rich countries have laws that focus on elements of the oil and/or mining sector (e.g., mining code, petroleum exploration and production act, among others). In addition, more general laws often represent a major component of the rules for the industry, including environmental laws, labor laws, tax laws, and land management laws. In democracies, legislation is usually created by a process requiring action by the legislative and the executive branches of government, which means that changing the rules embodied in legislation also requires legislative approval.

Regulations and model contracts. *Regulations* are usually the implementing rules created by an executive body of government to make legislation practical. They are most often tied to a law but provide significantly more detail. For example, a law may require that the executive awards petroleum licenses by competitive tender and spell out the general parameters governing the tender process. The regulation implementing this legislation may then describe how, when and where interested companies must register their interest and the specific forms they must submit. Often the legislation will give some guidelines about what the regulations should cover. The method of passing regulations varies from one country to another, but in many instances a branch of the executive (such as a ministry, or the cabinet acting as a whole) has the power to create regulations without seeking legislative approval.

A *model contract* provides a template for agreements between the government and extractive companies. Some countries have very detailed model contracts, with one or several sections left blank to account for the results of a tender process, or to be completed during negotiation. In other cases, the model contract serves as a starting point and more substantial variation is allowed as a part of individual negotiations. By using model contracts, states can reduce the need for lengthy negotiations and increase their leverage by fixing some of the parameters that would otherwise be up for negotiation. Some governments have formalized their use of a model contract by establishing it as a regulation or appending it to legislation. In other countries, the model is more of a guiding document created by the government or state-owned enterprise(s) responsible for licensing or contract negotiation.

“By using model contracts, states can reduce the need for lengthy negotiations and increase their leverage by fixing some of the parameters that would otherwise be up for negotiation.”

International standards and laws

Many contracts require companies to comply with “good industry practice.” How this phrase is interpreted can vary from country to country, but often includes consideration of the many voluntary standards or semi-voluntary agreements that exist between governments, multi-stakeholder bodies, and industry. The International Council on Mining and Metals (ICMM), for example, is a group of mineral extraction companies that have agreed to measure their performance against a set of ten principles of sustainable development. Because of the influence of the companies involved, some of these principles may become industry standards. In a similar vein, many international financial institutions have tried to influence industry standards through compliance requirements for their loans. To obtain a loan from the International Finance Corporation (IFC), for example, companies must comply with a strict set of social and environmental performance standards. The Extractive Industries Transparency Initiative (EITI) is a multi-stakeholder initiative that promotes transparency and accountability. While it is implemented on a country-by-country basis, it aims to influence the level of transparency throughout the industry.

In addition to these voluntary standards, there is also a body of international law that governs the actions of states. This international law is formed through agreements between countries about how governments should operate. Human rights law, for example, describes how governments should respect and protects the rights of people within their borders. This law includes a responsibility to protect people from violations of rights by third parties, such as corporations. In some situations, people impacted by extraction operations have appealed to these international laws when they felt their rights were violated during the process of extraction.

Contracts: Contracts are agreements between two or more parties. While laws apply to an entire territory, a contract only applies to a specific location and to the actors that are party to it. There are myriad contracts that govern individual mining or petroleum projects, but the ones that receive the most attention are the contracts in which the state grants the right to explore or extract natural resources. These are often referred to as *host government agreements* or *state-investor agreements*. They can take several forms including concessions, production sharing contracts, and service agreements.

A contract lays out those role and responsibilities that are not specified by the law. Contracts often include terms bearing on operational, financial, social, environmental and production obligations. (See more below on the relationship between laws and contracts.) Because the contract is limited in scope by geography and parties, a different contract must usually be negotiated and signed for each extraction site. A contract can be changed when both parties agree.

“Contracts often include terms bearing on operational, financial, social, environmental and production obligations.”

Primary types of contracts

Through a **concession agreement**, a government licenses a company (or, a lead company and its joint venture partners) to develop resources in a given geographic area. The rights to the resource (either minerals or petroleum) are legally held by the commercial operator. This concession holder finances all the costs of exploration, development, and production. The government typically receives a royalty, fees for acreage, and taxes paid by the joint venture, as well as bonuses and social taxes. If the government is a partner in the joint venture, it also receives a share of the production corresponding to the share it owns.

In a **production sharing contract (PSC)**, the government owns the resource, even though it agrees by contract to compensate the company for developing the field through in-kind oil payments. (PSCs are rare in the gas sector and are not utilized in the mining sector). Specifically, under a production sharing contract the company or contractor provides all the funding and recovers its costs in the oil it produces. After recovering all costs, the contractor shares the profit, in oil, with the government according to an agreed formula.

Under **technical service agreements**, the government retains control of the resources and enters into an agreement for a company to provide technical services in the form of exploration work, construction, and managing the development process. The government keeps the resource that is produced and then pays the company in either cash or commodity (e.g., oil). Under this type of agreement, remuneration is not based on production but on activities (e.g., man-hours rendered by the contractor). These forms of contracts are rare and generally used in some OPEC countries like Iran, Kuwait, and Saudi Arabia.

HOW IT ALL FITS TOGETHER

Some countries have constitutions, laws, and regulations that are very specific about the rules governing extractive industries. As a result, there may be less information in contracts and less for governments and companies to negotiate about for each deal. In the image below, Country A has more detailed laws and regulations, so the government needs to cover fewer terms in the contract. Country B, on the other hand, has less detail established elsewhere in the legal hierarchy, and thus leaves more detail to be fixed by each contract. Some governments have even agreed to terms in individual contracts that actively contravene the provisions of the law or regulation. Lawyers drafting the contracts will often make references to the different laws and regulations, meaning that those who seek to understand the terms must have all relevant laws and documents to hand.

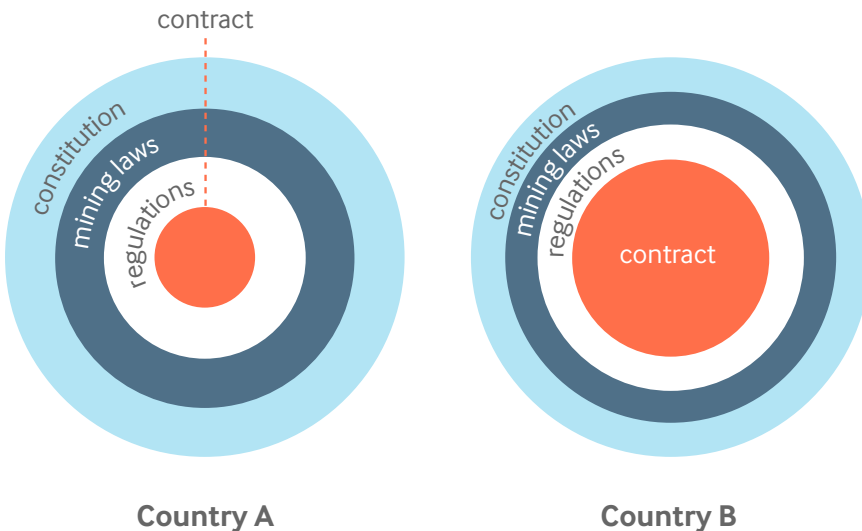


Figure 2. The scope of a contract can vary

Source: Mining Contracts - How to read and understand them

Experts increasingly suggest that the model with more detailed laws and regulations (that of Country A), creates a stronger foundation upon which a country can manage its extractive industries according to national priorities. In addition to helping investors to feel like they are being treated equally across deals, consistent terms across projects can streamline monitoring for government institutions. A robust legislative framework may also result in greater public input because the public can more easily participate in the legislative process than in individual contract negotiations.

There are two kinds of *clauses*, or sections, in natural resource contracts that have a special impact on the relationship between laws, regulations and contracts. A *stabilization clause* mandates that changes in legislation or regulation enacted after a contract is signed or enters into force will not apply to the parties' implementation of the project covered by the contract. In effect, it freezes the laws and regulations based on the day the contract is signed or becomes relevant. The clauses often serve to limit the government's ability to change the rules governing the project through national laws without the company's consent. In order to prevent stabilization clauses from totally stopping public policy progress while still giving companies a confidence in the security of their investments, many countries now draft clauses that restrict stabilization for a fixed number of years or limit the reach of stabilization to fiscal provisions rather than the broader set of rules, such as environmental or human rights protections.

Stabilization clauses can interact closely with *international arbitration clauses*, which exist because some companies have concerns about the stability of the legal framework of those countries where they are investing. Because foreign investors often lack confidence that a domestic court system will provide a neutral forum to adjudicate a dispute, contracts often stipulate that any disputes (or a particular sort of dispute) that cannot be resolved amicably will be settled by an international panel of experts in arbitration. Bilateral or multi-lateral investment treaties between resource-rich countries and the home countries of investing companies sometimes contain similar clauses. Many investors and economic analysts reason that arbitration provisions facilitate investment by providing security to ensure fair treatment and respect of applicable rules, even where domestic judicial systems are weak or biased. Such clauses have been controversial, however, because they serve to limit states' practical ability to exercise their sovereignty.

“A legal framework with comprehensive laws and regulations, and less detail up for negotiation in individual contracts, provides a stronger foundation upon which a country can manage its extractive industries according to national priorities.”

QUESTIONS TO ASK

- How is the legal architecture organized in my country?
- Do I have access to all the relevant documents?
- What is the balance in my country between what is covered by legislation and regulation versus what is negotiated in the contract?

ADDITIONAL RESOURCES

Further reading

Oil Contracts: How to read and understand them (OpenOil 2012) available at: <http://openoil.net/contracts-booksprint/>

Mining Contracts: How to read and understand them (2014), available at: <http://www.resourcecontracts.org/blog/guides-to-contract-terminology.html>

Smith, Erin and Peter Rosenblum, Enforcing the Rules (NRGI 2011) , available at: <http://www.resourcegovernance.org/publications/enforcing-rules>

The Natural Resource Governance Institute, an independent, non-profit organization, helps people to realize the benefits of their countries' oil, gas and mineral wealth through applied research, and innovative approaches to capacity development, technical advice and advocacy.
Learn more at www.resourcegovernance.org

Measurement and Assessment of Natural Resource Governance

Benchmarking and Ranking to Identify Reform Priorities

KEY MESSAGES

- The success or failure of resource management rests on getting governance and economic management right across a whole chain of decisions. Therefore, each step in the chain must be carefully considered.
- NRGI provides two measurement and assessment tools to help countries identify their strengths and weaknesses: the Resource Governance Index and the Natural Resource Charter Analysis Framework.
- These frameworks can help resource-rich countries identify and address weaknesses and inform comprehensive sector reforms or strategies.

“Countries ought to initiate a strategy process as early as possible; the process should guide decision making yet remain adaptable to changing circumstances.”

– Natural Resource Charter, Precept 1

ASSESSING THE QUALITY OF NATURAL RESOURCE GOVERNANCE

For different and complementary purposes, the Resource Governance Index (RGI) and the Natural Resource Charter Analysis Framework represent two of the leading tools for assessing the quality of natural resource governance. These tools—in particular the charter analysis framework—can serve to organize the discussion and development of national strategies for how to maximize benefits from natural resources. This reader will describe both tools and provide information about how they differ from and complement each other.

RESOURCE GOVERNANCE INDEX (RGI)

The RGI is a measure of transparency and accountability of the oil, gas and mining sector in 58 countries produced by NRGI. To compile the index researchers use a specially designed questionnaire to collect data. The RGI is a hybrid index, using a mix of primary and secondary data. The primary data collected through the questionnaire assesses the governance and transparency in the extractive sector. To include information about the general country context (under a component called *enabling environment*), the index uses data gathered from more than 30 external sources including the Economist Intelligence Unit (EIU), International Budget Partnership, Transparency International (TI) and Worldwide Governance Indicators (WGI). The RGI is not a survey of opinions, but instead looks at whether a country meets a set of standards, primarily by assessing whether the country publicly discloses information about a specific issue in the governance of natural resources.

This reader is intended for use in conjunction with the Natural Resource Charter.

The RGI evaluates four key components of resource governance in each country. It assigns a numerical score to each country and divides them into four performance ranges—satisfactory, partial, weak and failing.

The four components (with indicators) from the 2013 RGI are in Figure 1.

Institutional & Legal Setting (20%)	Reporting Practices (40%)	Safeguards & Quality Controls (20%)	Enabling Environment (20%)
10 Indicators	20 Indicators	15 Indicators	5 Indicators
Indicator	Indicator	Indicator	Indicator
Freedom of information law	Licensing process	Checks on licensing process	Accountability & democracy (EIU Democracy Index & WGI voice and accountability)
Comprehensive sector legislation	Contracts	Checks on budgetary process	Open Budget (IBP Index)
EITI participation	Environmental and social impact assessments	Quality of government reports	Government effectiveness (WGI)
Independant licensing process	Exploration data	Government disclosure of conflicts of interest	Rule of law (WGI)
Environmental and social impact assessments required	Production volumes	Quality of SOC reports	Corruption (TI Corruption Perceptions Index & WGI control of corruption)
Clarity in revenue collection	Production value	SOC reports audited	
Comprehensive public sector balance	Primary sources of revenue	SOC use of international accounting standards	
State Owned Company (SOC) financial reports required	Secondary sources of revenue	SOC disclosure of conflicts of interest	
Fund rules defined in law	Subsidies	Quality of fund reports	
Subnational transfer rules defined in law	Operating company names	Fund reports audited	
	Comprehensive SOC reports	Checks on fund spending	
	SOC production data	Government follows Fund rules	
	SOC revenue data	Fund disclosure of conflicts of interest	
	SOC quasi fiscal activities	Quality of subnational transfer points	
	SOC board of directors	Government follows subnational transfer rules	
	Comprehensive fund reports		
	Fund rules		
	Comprehensive subnational transfer reports		
	Subnational transfer rules		
	Subnational reporting of transfers		

Figure 1. Categories for evaluating countries in the Resource Governance Index

RGI key findings (2013)

The RGI shows a **striking governance deficit in natural resource management world-wide**. Only 11 countries earn an overall score of above 70. The vast majority of countries exhibit serious shortcomings in resource governance.

The governance deficit is largest in the most resource-dependent countries. Of the 58 countries in the RGI, 41 are classified as resource-rich by the International Monetary Fund. Only five of the 41 countries (Norway, Mexico, Chile, Peru, and Trinidad and Tobago) have satisfactory standards of resource governance (a composite score of 70 or more).

The governance deficit affects nearly 450 million poor people in the most resource-dependent countries. The share of the population living on less than \$2 a day is higher at the bottom half of the RGI ranking. In 26 resource-rich countries with weak and failing performance, more than 300 million people (or 50 percent of their combined populations) live on less than \$2 a day.

NATURAL RESOURCE CHARTER ANALYSIS FRAMEWORK

The Natural Resource Charter Analysis Framework is an assessment tool to help government officials and other stakeholders measure how well a country is doing at developing policy on the management of extractive resources. Based on the 12 precepts of the Natural Resource Charter, the framework features analytical questions and guidance to help researchers carry out detailed country-specific analyses that take into account the full range of issues involved in effective resource management. The framework can be employed in a variety of ways, from complex and detailed national planning exercises that look at the whole decision chain to short research projects that only look at one specific link in the decision chain.

Questions and guidance in the framework have been designed to analyze two different aspects of government policy making in extractive resources. *Policy analysis* questions look at how effective current government policies and practices are. They seek to assess the impact of current policies on the management of extractive wealth and whether the government employs appropriate policies. While the RGI questions focus on whether a country meets standards, the charter assessment questions look at implementation and impact of policies.

Governance questions, by contrast, look at the wider governance environment in which government policy is being developed. Importantly, these questions assess whether a country has in place the appropriate rules, institutions, feedback, oversight and accountability mechanisms for government to identify and correct bad policy where appropriate and adapt policy to changing circumstances and new information.

Different uses of the Natural Resource Charter Analysis Framework

NRGI employs the charter analysis framework in many different aspects of the organization's work. The intended use of the framework dictates the depth of research and the number of stakeholders involved. Possibilities include:

- **National benchmarking exercises.** NRGI has supported the governments of Tanzania and Sierra Leone, and a group of civil society experts in Nigeria to use the framework to carry out detailed national diagnostic exercises. Repeated over time, these reports are a good tool to monitor reform progress.
- **Country strategy notes.** The framework has been used as the basis of contextual analysis to underpin NRGI's country strategies.
- **Workshops.** The framework can be used to guide discussion, analysis or exercises prior to, during or after a workshop or series of workshops. Questions from the framework can be used to orient participants at NRGI courses to better appreciate the charter decision chain.
- **Specific research projects.** The framework can be used as a starting point to build terms of reference for specific research work and to orient consultants on specific issues they should tackle in their research.
- **Basic gap analyses.** The framework and allied checklists have been designed to help map knowledge against the charter, and to determine where knowledge gaps exist.

FACILITATING COMPARISONS AND RESEARCH

The data produced by the RGI is publicly available, as are a number of data tools available on the website. These tools allow the user to see the data broken down by various categories to create comparisons based on geography or economic characteristics. The large data pool can facilitate more research in the sector and foster general theories about how to improve governance in the sector.

Similarly, as results from national exercises that use the charter analysis framework become available, public reports with detailed information about the management of extractives are coming into the public realm. While the information from the charter analysis framework provides a more detailed picture of where a country can focus to improve its extractive governance, the RGI allows an easier comparison of progress between countries and regions.

Case study: Nigeria

The RGI and benchmarking assessment produce different types of information about a country. Consider below the information about Nigeria produced in the summary from the RGI and the benchmarking exercise.

Nigeria's performance on the 2013 Resource Governance Index

Nigeria received a "weak" score of 42, ranking 40th out of 58 countries. Relatively strong performance on the institutional and legal setting component contrasted with a poor enabling environment score. The RGI country page (<http://www.resourcegovernance.org/countries/africa/nigeria/overview>) allows users to consider the score for each component as well as individual indicators. The RGI data tool (<http://index.revenuewatch.org/rgi/data-tool/>) allows users to compare Nigeria's performance to that of other countries.



Figure 2. RGI score for Nigeria

Natural Resource Charter Benchmarking of Nigeria (2014)

For each of the 12 Natural Resource Charter precepts, a series of questions was devised and answered by an expert panel using publicly available information. A "traffic light" system was adopted to assess whether each answer was positive (green), negative (red) or partial (amber). Where change has been observed from previous the report, the report uses upward and downward arrows to signify policy or governance improvements or deteriorations respectively. An equal sign is used where no change has been observed. This visual approach enables users to quickly identify strengths and weaknesses across the 12 precepts of the charter and track where change has occurred. The full 2014 report is available at <http://nigerianrc.org/content/2014-nnrc-benchmarking-report>.

Precept 1: Securing benefits for all Sector prioritizes short-term commercial aims over longer-term socio-economic ones	=	Precept 7: Investing for growth Recurrent to capital expenditure ratio remains high	=
Precept 2: Transparency and Accountability Murkiness prevails, e.g. "missing \$20 billion"	=	Precept 8: Stabilizing Expenditure Sovereign Wealth Fund versus Excess Crude Account. SWF still competing for legitimacy	=
Precept 3: Fiscal regime and contractual terms Losses persist due to weak regulation of costs	=	Precept 9: Efficiency and equity of public spending More "expenditure switching" for security, poor Subsidy Reinvestment and Empowerment Programme	↓
Precept 4: Award of contracts and sector roles Discretion and political influence play major roles	=	Precept 10: Private sector investment New projects like \$9 billion Dangote refinery and petro-complex	↑
Precept 5: Managing local impacts Local content increases, high environmental costs persist	=	Precept 11: Role of companies' home governments Communities seek redress abroad, transparency gains	↑
Precept 6: Nationally owned resource companies NNPC politically influenced, needs restructuring	=	Precept 12: Role of private sector companies Indigenous petroleum companies should follow international best practices	=

Figure 3. Nigeria Charter Benchmarking report (2014)

QUESTIONS TO ASK:

- How does my country perform on the Resource Governance Index? How does it compare to other countries in my region? Countries with similar economic characteristics?
- Are there ways to use the information from the RGI as an advocacy tool in my country?
- Has my country conducted an assessment using the charter analysis framework? If so, what are the areas of decision making where my country does well? Where can we do better?
- If my country hasn't conducted used the charter analysis framework, would it be useful? Who should be involved to make the most impact?

ADDITIONAL RESOURCES

NRC Analysis Framework (forthcoming, summer 2015).

Nigeria Natural Resource Charter benchmarking framework, available at: <http://nigerianrc.org/content/2014-nnrc-benchmarking-report>.

Resource Governance Index, available at: <http://www.revenuewatch.org/rgi>.

The Natural Resource Governance Institute, an independent, non-profit organization, helps people to realize the benefits of their countries' oil, gas and mineral wealth through applied research, and innovative approaches to capacity development, technical advice and advocacy.
Learn more at www.resourcegovernance.org



Transparency Mechanisms and Movements

Tools to Foster Openness and Accountability

KEY MESSAGES

- Transparency is a fundamental tool to promote efficiency and accountability in converting natural resource wealth into long term social and economic development.
- For transparency to be effective, information disclosures must be *relevant, accessible, timely, and accurate*.
- Transparency is the root of many campaigns to reform the management of extractive industries.
- There are numerous mechanisms and movements for transparency that often have overlapping and mutually reinforcing aims.

TRANSPARENCY AND ITS IMPORTANCE

Transparency is central to the aim of transforming natural resource wealth into sustainable economic and social development. Relevant, timely, accessible information sharing can bolster oversight, improve trust between multiple actors and mitigate waste. This reader defines transparency and gives a brief overview of different transparency movements and mechanisms. Other readers in this set provide more detail on specific movements and mechanisms. (e.g., PWYP and EITI)

Transparency is not just about making information available. Large disclosures of old information in inaccessible formats cannot promote accountability or improve performance. For transparency to have impact, information disclosures must be relevant, accessible, timely and accurate. To be *relevant and accessible*, the information should be presented in plain language and in formats appropriate for multiple stakeholders. For example, PDFs filled with tables of numbers and acronyms are not useful for either lay or expert analysis. Lay readers would need a summarized description of what the figures mean, while the expert analyst needs the data in a file format that they can sort and manipulate (i.e., in what is often referred to as *open data format*). In the extractive industries field, discussions about transparency often revolve around whether the information is *disaggregated*. Information about revenues, for example, can be disaggregated on a project-by-project, company-by-company or state-by-state basis. Whether and how the information is broken down into different categories

“Governments, international organizations and other actors can improve transparency by establishing and enforcing a set of international standards for financial and accounting records, as well by disclosing contractual terms. Public disclosure of information throughout an extractive project, from exploration licensing to project clean-up, is a vital mechanism for helping citizens and investors to hold governments and companies to account.”

– Natural Resource Charter, Precept 12

This reader is intended for use in conjunction with Precepts 2, 11 and 12 of the Natural Resource Charter.

makes the data more useful and relevant to different actors. The highest possible level of disaggregation is often a pre-condition for a meaningful analysis of data.

To be *timely and accurate*, the information must be provided in a manner that allows stakeholders to analyze and respond to the data to inform relevant decisions or advocacy. The level of detail of information can impact its accuracy. For example, it is not uncommon for shell companies to be at the forefront of bidding in a licensing process. When there is no information on beneficial ownership, that is, who has paid to own and operate the bidding company, it is difficult for governments and oversight actors to know who is actually going to be implementing and benefiting from a project.

“For transparency to be effective, information disclosures must be relevant, accessible, timely, and accurate.”

Advocates throughout the transparency movement have emphasized that transparency is not an end in and of itself. Instead, advocates have often framed transparency as a means to achieve *accountability*, ensuring that public, private and voluntary sector organizations are answerable for their actions and that there is redress when duties and commitments are not met.

THE ORIGIN OF TRANSPARENCY MOVEMENTS AND MECHANISMS IN NATURAL RESOURCE GOVERNANCE

The movement for increasing the benefits that communities realize from extractive industries has long been rooted in transparency. In 2002, a small group of activists launched the Publish What You Pay coalition with the aim of avoiding the resource curse through promoting transparency. The campaign was developed, at least in part, around the idea that if citizens had access to information about what governments received in natural resource revenues, they could ask better questions about how those revenues are spent. The group was reacting to particularly egregious examples of resource mismanagement and corruption. Transparency was seen as a means to greater accountability and increased performance. For example, transparency about mineral opportunities has been linked with improved performance during open bidding auctions. Investors in the extractive industries benefit from more information about the operating environment in different countries and the risk associated with their investment.

WHAT ARE SOME TRANSPARENCY MECHANISMS AND MOVEMENTS?

There are many tools, coalitions and mechanisms that can be and are used to promote transparency in the extractive industries. The list below, which is not exhaustive, provides a brief summary of some of these mechanisms.

International initiatives

- **Publish What You Pay** (www.publishwhatyoupay.org). PWYP is a global coalition of civil organizations seeking transparency in the extractive industries. It has three major pillars of advocacy: publish why you pay and how you extract, publish what you pay, and publish what you earn and how you spend (for more information, see the reader on PWYP).

- **Extractive Industries Transparency Initiative** (eiti.org). EITI is a multi-stakeholder initiative that aims to promote openness and accountability in the management of natural resources throughout the decision making chain. Each country that implements the EITI has a multi-stakeholder board that publishes a report reconciling information from government and extractive companies throughout the decision making chain. The process of creating these reports must meet a set of *standards*, which are checked through a process of *validation* (for more information, see the reader on the EITI).
- **Open Government Partnership** (www.opengovpartnership.org). The OGP is multilateral initiative that aims to secure concrete commitments from governments to promote transparency, empower citizens, fight corruption and harness new technologies to strengthen governance. Governments who have committed to the OGP create action plans in consultation with civil society groups that set forth goals for transparency and accountability.
- **Natural Resource Charter** (naturalresourcecharter.org). The Natural Resource Charter is a set of principles, including policy options and practical advice, for governments, societies and the international community on how to best manage resource wealth. The second precept calls for transparency of information throughout the decision making chain to be a foundation of resource management. Through a benchmarking methodology, countries can assess how their resource governance practices measure up against the charter's prescriptions (for more information see the readers on measurement and assessment of natural resource governance and the Natural Resource Charter decision chain).
- **Accounting standards**. Similar to some of the national disclosure rules listed below, accounting standards create requirements for companies to disclose information if they are to be in compliance with certain business standards. For example, the International Financial Reporting Standards (IFRS) sets the requirements for accounting practices, and therefore disclosure requirements, in many countries. They could have a strong influence on the transparency of information related to natural resources if they adjusted their requirements to include disaggregated public disclosure of resource related payments.

National initiatives. Many countries can pass laws or begin transparency initiatives that go beyond what is called for with the international mechanisms. Some of these national initiatives may have standard-setting power or apply to multiple jurisdictions, de facto giving them the reach of international initiatives. Here are a few examples:

- **Freedom of information laws.** National freedom of information laws provide citizens with a mechanism to ask for information from the government and require governments to provide justification when it fails to provide that information. Though the scope of these laws vary from country to country, they are often a strong tool for civil society activists and journalists to gain insight to government processes and decisions.

“Many countries can pass laws or begin transparency initiatives that go beyond what is called for with the international mechanisms. Some of these national initiatives may have standard-setting power or apply to multiple jurisdictions.”

- **Mandatory disclosure rules.** Mandatory disclosure rules are legal requirements for companies to systematically disclose the payments they make to governments. Some countries make disclosure rules for companies involved in a contractual relationship with the government. Other countries require disclosure for all companies that are listed on stock exchanges within their country. For example, the Dodd-Frank Act passed the United States Congress, requires all extractive companies to provide information about the payments they make to the United States and foreign governments to the U.S. Securities and Exchange Commission.
- **Contract transparency.** Many countries have adopted a policy to publish some or all of the contracts signed between the host government and the extractive company. For instance, article 150 of the constitution in Niger requires the government to publish all new extractive contracts. The availability of contracts, even if they are not confidential per se, varies from country to country. Resourcecontracts.org makes hundreds of resource contracts available to the public (for more, see the reader on contract transparency).
- **National transparency initiatives.** Many countries have created extractive-related transparency processes that go beyond what may be required for compliance with international standards, such as the EITI. In Ghana, for example, the Petroleum Revenue Management Act (PRMA) created a Public Interest and Accountability Committee (see: piacghana.org). This independent multi-stakeholder group was charged with monitoring and enforcing government compliance with revenue management regulations.

“In Ghana the Petroleum Revenue Management Act created a Public Interest and Accountability Committee. This independent multi-stakeholder group was charged with monitoring and enforcing government compliance with revenue management regulations.”

QUESTIONS TO ASK

- What transparency mechanisms and movements exist in my country?
- If I don't think there is sufficient transparency, which of these movements best corresponds with the area where more information and disclosures are needed?
- When information is made available in my country, is it accessible, relevant, timely and accurate?
- What information is available in other countries about companies operating in my country?

ADDITIONAL RESOURCES

Natural Resource Charter, Precept 2 and 11, available at:

http://www.resourcegovernance.org/sites/default/files/NRCJ1193_natural_resource_charter_19.6.14.pdf.

Darby, Sefton, *Natural Resource Governance: New Frontiers in Transparency and Accountability* (Transparency and Accountability Initiative, 2011), available at:

<http://www.transparency-initiative.org/reports/natural-resource-governance-new-frontiers-in-transparency-and-accountability>.

NRGI readers on EITI, PWYP, Contract Transparency, Measurement and Assessment of Natural Resource Governance, and the Natural Resource Charter Decision Chain.

The Natural Resource Governance Institute, an independent, non-profit organization, helps people to realize the benefits of their countries' oil, gas and mineral wealth through applied research, and innovative approaches to capacity development, technical advice and advocacy.
Learn more at www.resourcegovernance.org

Contract Transparency

Creating Conditions To Improve Contract Quality

KEY MESSAGES

- Contracts represent the agreement between the government and the extraction company about how, when and at what cost the extraction occurs. They represent the “deal” the government gets in exchange for mineral rights.
- In order for citizens, parliamentarians and oversight actors to monitor and analyze the public benefit from contract deals, contracts must be made publicly available.
- Contracts can be disclosed without a threat to the industry or governments.
- Contract transparency is a growing phenomenon in developed and developing economies as its benefits to all stakeholders are becoming more obvious.

“Authorities should . . . publish contracts and make them readily available online.”

– Natural Resource Charter, Precept 2

WHAT ARE CONTRACTS, AND WHY IS CONTRACT TRANSPARENCY IMPORTANT?

In most countries, oil, minerals and gas are the property of the nation. That means the country and its citizens own these resources. Governments, as representatives of the nation, often sign licenses or contracts with companies giving the companies the right to extract the natural resources in exchange for a share of the profits. The contract represents the terms of the agreement between the company and government. In addition to the fiscal terms, contracts often also include information about local content, environmental impact, infrastructure and production timing.

Because the citizens of the country are co-owners of these resources, they have a right to understand the terms of the extraction. When contracts remain secret, citizens and oversight actors cannot properly monitor the implementation of the deal, and the country is at high risk of corruption and leakage. Moreover, at an international level, the fact that so many contracts remain opaque puts states at a disadvantage in contract negotiations. Extractive industry companies often have access to one another’s contracts and have more sophisticated and detailed knowledge of extractive industry market conditions than most governments. Because publicly available contracts are rare, governments lack a similar basis for understanding prevailing market conditions. Finally, the fact that so many contracts remain secret reinforces a culture of impunity in which public officials are not held accountable for questionable deals they make. **Contract transparency is crucial in ensuring that laws are followed, country benefits are maximized, and communities are reassured that the government is acting in the public interest.**

This reader is intended for use in conjunction with Precept 2 of the Natural Resource Charter.

It is important to note that there are many contracts that outline the agreements between myriad parties for each oil, gas or mining project. The type of contract discussed here, and which is the target of most international advocacy, is known as the state-investor agreement, or host government agreement.

THE LEGAL HIERARCHY

Contracts do not exist in a vacuum. Instead, they are part of a country’s overarching legal framework for managing extractive industries. This framework can often be thought of as a hierarchy, as shown in the pyramid that has its foundation in the constitution. The constitution establishes the authority of the government to make and enforce laws. It may also include information about the fundamental rights and values of the country, potentially including natural resource ownership. The next level of the pyramid includes the laws and policies that govern the industry. This might include a mining or petroleum law, environmental laws, health and safety laws, tax laws and labor laws. Regulations are more specific requirements that are usually set forth in accordance with a law by an executive ministry or department. A model contract, which outlines general terms for possible contracts in the country, could be created as a regulation or as part of legislation. While the constitution and laws apply very broadly, the contract has specific terms that apply specifically to the companies involved in one extraction site and the government.

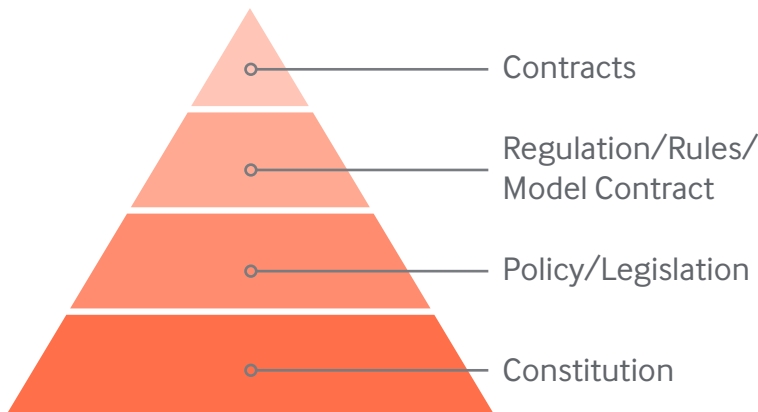


Figure 1. The Legal Hierarchy

Source: NRGi

Some countries have constitutions, laws and regulations that are very specific about the rules governing extractive industries. As a result, there may be less information in the contract and less for the government and company to negotiate about for each deal. While theoretically the laws and policy are supposed to have more authority than a contract—*take precedence*, in legal speak—contracts can also be written to explicitly override the laws and regulations. This can have a negative overall impact on extractive industry governance, as too much variance from one project to another makes it more difficult to effectively monitor and enforce agreements. In practice, the prevalence of contract-specific arrangements means that even when legal frameworks have many details about the extractive policy, oversight is impossible without the contract.

“The prevalence of contract-specific arrangements means that even when legal frameworks have many details about the extractive policy, oversight is impossible without the contract.”

WHY AREN'T ALL CONTRACTS ALREADY PUBLIC?

In most countries, when laws are passed, the laws become public documents. As such, everyone in the country knows the rules and can check whether others are following them. You may be wondering why extractive industry contracts are different. The primary reason seems to be a vestige of long-standing industry practice. Extractive industry contracts emerged from purely commercial contracts, which typically had a confidentiality clause indicating that there would be consequences if either party shared the terms with anyone else. This practice of secrecy has persevered in most oil- and mineral-rich countries, even with public contracts that govern billions of dollars of public revenues and directly impact the lives of many citizens.

ARGUING FOR CONTRACT TRANSPARENCY

The most common arguments against contract transparency, as demonstrated below, are fairly easily rebutted.

Argument: Contracts contain commercially sensitive information that could cause competitive harm if disclosed.

Rebuttal: *Contracts are already widely circulated within the private sector, and the types of contracts being disclosed do not generally contain information that would meaningfully impact a company's competitiveness.*

Argument: Confidentiality clauses do not permit contract transparency.

Rebuttal: *Legislation and/or mutual consent can generally supersede confidentiality clauses. Confidentiality clauses often make room for exceptions when all parties to the contract agree. Though many extractive industry contracts have confidentiality clauses that expressly forbid contract disclosure, many others do not.*

“Legislation and/or mutual consent can generally supersede confidentiality clauses. Confidentiality clauses often make room for exceptions when all parties to the contract agree.”

Argument: Contract transparency will scare off investors.

Rebuttal: *There is no evidence that a company's or a country's commercial position has been affected due to contracts being disclosed. In fact, countries such as Liberia and Ghana have received significant investment while disclosing contracts.*

Argument: Contracts are too complex for the general public to understand.

Rebuttal: *There is a wealth of free educational tools available to educate policymakers as well as civil society, the general public and media. While there is clearly a need for additional public education on how to analyze and monitor extractive industry contracts, a growing amount of experience shows that disclosure improves public dialogue and provides a strong basis for improving citizen understanding.*

NRGI finds that multiple stakeholders stand to benefit from the disclosure of contracts. See the table below for more details.

Stakeholder	How contract transparency benefits each stakeholder
Civil society organizations	<ul style="list-style-type: none"> • Increased ability to analyze government decisions • Increased access to information on management of public resources • Reduced corruption or unequal distribution of wealth as contracts are made more focused on national development • Easy access to contract terms enables checks on company and government compliance with the contract
Government	<ul style="list-style-type: none"> • Increase of trust between government and citizens • Increase in independent analyses of contracts • Increased capacity in contract monitoring • Increase in government’s reputation for investors, with subsequent increase in investment, access to credit and decrease of investor risk • Increase in popular support for contract renegotiations and reviews • Increase in information to bring to future negotiations
Companies	<ul style="list-style-type: none"> • Better relationships and increased trust with communities • Decrease in community complaints • More stable contracts and decreased pressures to renegotiate • Decreased risk of corruption in negotiations and follow-up

CONTRACT DISCLOSURE IS GROWING

While many jurisdictions have not traditionally made their oil, gas and mineral contracts available to the public, more recent developments have shown that contract disclosure is feasible and desirable for a wide range of countries. NRGi’s 2013 Resource Governance Index (RGI) found that of 58 countries studied, 20 countries publish all or some of their extractive contracts.

“NRGI’s 2013 Resource Governance Index found that of 58 countries studied, 20 countries publish all or some of their extractive contracts.”

All or most contracts available	Some contracts available
Australia	Afghanistan
Canada	Azerbaijan
Democratic Republic of the Congo	Colombia
Ecuador	Ghana
Guinea	Iraq
Liberia	Mexico
Norway	Mongolia
Peru	Timor-Leste
United Kingdom	Venezuela
USA	Yemen

In addition to country practice, contract disclosure is increasingly recognized as a part of international best practice. The new Extractives Industries Transparency Initiative (EITI) Standard adopted in 2013 encourages contract disclosure, as does the International Monetary Fund (IMF) Guide on Resource Revenue Transparency, the International Finance Corporation’s Performance Standards, and the Natural Resource Charter.

A growing number of extractive industry companies have also begun to speak out in favor of the benefits of contract publication, arguing that it helps increase trust and their social license to operate and to more effectively manage citizen expectations. Among those that have made statements in favor of contract disclosure are oil companies Tullow and Kosmos, mining companies Newmont and Rio Tinto, and the International Council on Mining and Metals (ICMM), an association of the world's leading companies in the mining and metals industry.

BEYOND DISCLOSURE

The first step in contract transparency is for the government and the companies to agree that the contracts can be shared openly, or for the government to pass a law requiring contract transparency. Once contracts can be disclosed, it is important that they are easily accessible by the public, including in the primary languages of the country. Oversight actors then have the responsibility to use the information disclosed in the contracts, together with other publicly available information, to monitor the company's performance and test whether it is in compliance with the contract. Civil society organizations have partnered with industry experts to put out new, easily accessible guides on monitoring and analyzing oil, mineral and gas contracts.

“A growing number of extractive industry companies have also begun to speak out in favor of the benefits of contract publication, arguing that it helps increase trust and their social license to operate and to more effectively manage citizen expectations.”

QUESTIONS TO ASK

- Are contracts in my country publicly available? If not, why not? If yes, are all contracts easily accessible and public?
- Do the companies in the country oppose contract disclosure? If so, why?
- Does the government oppose contract disclosure? If so, why?
- Are there strong independent actors in the country who are able to monitor contracts to ensure companies and government do not renege on their responsibilities? If not, what are the steps that could help empower such actors to take on an effective oversight role?

ADDITIONAL RESOURCES

Natural Resource Charter, Precept 2: <http://naturalresourcecharter.org/content/natural-resource-charter-pdf>

EITI Standard 2013, article 3, paragraph 12: http://eiti.org/files/English_EITI%20STANDARD_11July_0.pdf

Contract Disclosure in Using EITI for Policy Reform, Natural Resource Governance Institute Guide to the EITI Standard: <http://www.resourcegovernance.org/eitiguide/#!allocation-of-rights>

Oil Contracts: How to read and understand them (OpenOil, 2012), available at: <http://openoil.net/contracts-booksprint/>

Mining Contracts: How to read and understand them (2014), available at: <http://www.resourcecontracts.org/blog/guides-to-contract-terminology.html>

Rosenblum, Peter and Susan Maples, *Contracts Confidential* (NRGI 2009), available at: www.revenuewatch.org/contractsconfidential

Smith, Erin and Peter Rosenblum, *Enforcing the Rules* (NRGI 2011), available at: www.revenuewatch.org/publications/enforcing-rules

International collections of contracts:

- www.resourcecontracts.org
- repository.openoil.net/wiki/Downloads

Examples of public analytical documents that make use of published contracts to monitor enforcement and impact:

- Grupo Faro (Ecuador), *Análisis Económico y Socio-ambiental del Primer Contrato de Minería a Gran Escala* (2012), available at: <http://www.grupofaro.org/content/an%C3%A1lisis-econ%C3%B3mico-y-socio-ambiental-del-primer-contrato-de-miner%C3%AD-gran-escala-una-mirada-de>
- RELUFA (Cameroon), *EITI and Mining Governance in Cameroon: Between Rhetoric and Reality* (2014), available at: <http://www.reluфа.org/documents/GUIDERELUFAENdate.pdf>
- David Mihalyi, *Forecasting Ghana's Oil Revenues for the 2015 Budget* (NRGI, 2014), available at: http://www.resourcegovernance.org/sites/default/files/nrgi_ForecastingOilRevenues_2015GhanaBudget.pdf

The Natural Resource Governance Institute, an independent, non-profit organization, helps people to realize the benefits of their countries' oil, gas and mineral wealth through applied research, and innovative approaches to capacity development, technical advice and advocacy.
Learn more at www.resourcegovernance.org



Oil, gas and mining for development

The Extractive Industries Transparency Initiative (EITI)

Using EITI to Promote Policy Reform

KEY MESSAGES

- The Extractive Industries Transparency Initiative (EITI) is an international, multi-stakeholder initiative that promotes transparency and accountability in the oil, gas and mining sectors through the disclosure of government and company data in resource-rich countries.
- To be EITI-compliant, participating countries must meet a minimum set of standards that deal with the quality of reporting and the multi-stakeholder process used to create reports. This is verified through a validation process.
- In 2013, the EITI expanded to require disclosure of information throughout the decision-making chain. It was previously focused on revenues paid to the national government.

“Provide transparency of information along the entire chain of decisions.”

– Natural Resource Charter, Precept 2

The Extractive Industries Transparency Initiative (EITI) is at the forefront of the movement for transparency and accountability in extractive industries resource management. This reader discusses the history, structure, status and challenges of the EITI.

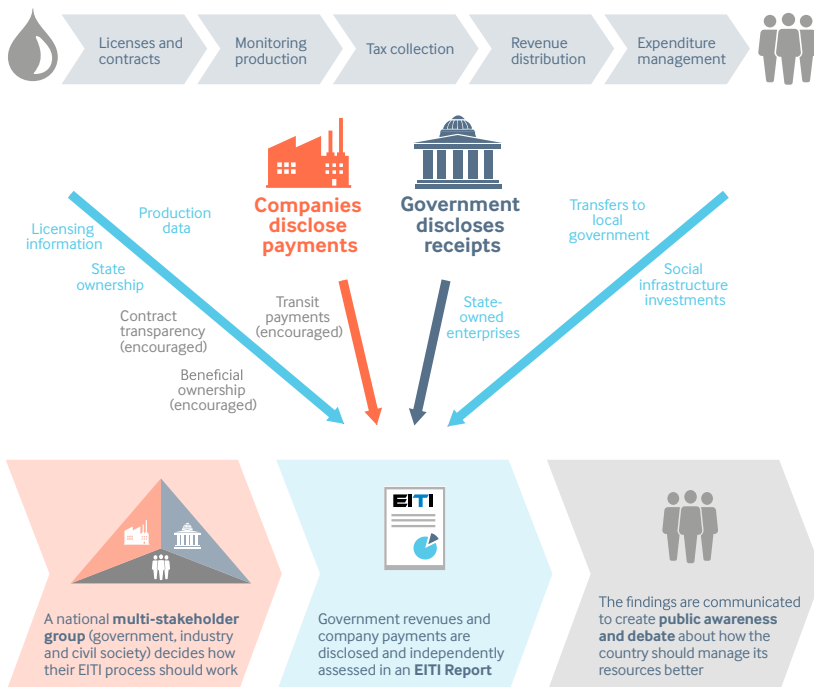


Figure 1. The EITI Standard

Source: EITI Standard, page 8, <https://eiti.org/document/standard>

This reader is intended for use in conjunction with Precept 2 of the Natural Resource Charter.

EITI GLOBAL STRUCTURE

The EITI is an international multi-stakeholder initiative that aims to promote natural resource transparency and accountability. The EITI is governed by an international board of 20 civil society, government and company representatives. The board makes policy decisions about the EITI, such as the EITI Standard, and assessments about whether countries are meeting those standards. The EITI Standard sets out required and encouraged provisions for countries implementing the EITI. A secretariat based in Oslo is responsible for turning policy decisions of the EITI board into action, and for coordinating worldwide efforts in implementing the EITI.

COUNTRY PROCESS

Countries that wish to participate in the EITI must meet the requirements of the EITI Standard, first becoming a candidate country and then a compliant country. In order to be declared a candidate country, a government must issue an unequivocal public statement of its intention to implement the EITI, appoint a senior individual to lead the implementation of the EITI, commit to work with civil society and companies to establish a multi-stakeholder group (MSG) to oversee the implementation of the EITI, and ensure that the MSG creates a costed work plan. When a country has completed each of these tasks, it may submit a candidate application, and the EITI board, working through its outreach and candidature committee, will review the application and assess whether the sign-up steps have been completed. After being accepted as a candidate, the country has 18 months to publish an EITI report and 2.5 years to commence the validation process.

EITI REPORTS

The MSG in an implementing country is responsible for overseeing the preparation of EITI reports, often supported by a national EITI secretariat. To produce an EITI report, oil, gas and mining companies are required to publish what they pay to governments, and governments are required to publish what they receive. These figures are then reconciled by an independent administrator who is appointed by the MSG, and any discrepancies are investigated. In addition to this payment and revenue data, EITI reports must include information on licenses and license allocations, in-kind revenues, mandated social expenditures, subnational payments, transportation revenues and production data. Disclosure of the text of contracts and licenses and information on the beneficial ownership of extractive companies is encouraged. It is required that EITI data is presented by individual company, government entity and revenue stream. Reporting at project level is required, provided that it is consistent with the United States Securities and Exchange Commission rules and the European Union Accounting Directive.

“In addition to payment and revenue data, EITI reports must include information on licenses and license allocations, in-kind revenues, mandated social expenditures, subnational payments, transportation revenues and production data.”

Allocation of rights	Production data	Revenue collection	State-owned enterprises (SOE)	Subnational	Social impact	Revenue management
Legal framework and fiscal regime (§ 3.2)	Exploration activities (§ 3.3)	Taxes and primary revenues (§ 4.2(a))	SOE level of beneficial ownership (§ 3.6(c))	Direct payments/receipts (§ 4.2(d))	Employment (§ 3.4(d))	Revenues in and not recorded in budget (§ 3.7)
License award/transfer process and deviation (§ 3.10)	Production volumes and values (§ 3.5(a) and § 3.4(e))	In-kind revenues (§ 4.1(c))	Government transfers by SOEs (§ 4.2(c))	Mandated national/subnational transfers (§ 4.2(e))	Social payments (§ 4.1(e))	Earmarked revenues and budget/audit process (§ 3.8)
Register of licenses (§ 3.9)	Export volumes and values (§ 3.5(b))	Infrastructure/barter provisions (§ 4.1(d))	SOE quasi-fiscal expenditures (§ 3.6(b))			
Beneficial ownership (§ 3.11)	Economic contribution (§ 3.4(a)-(c))	Transport revenues (§ 4.1(f))				
Contract/license disclosure (§ 3.12)		Revenue disaggregation (§ 5.2(e))				

Figure 2. EITI requirements and recommendations along the decision-making chain

Source: NRGi

VALIDATION

Validation is a review conducted by an independent agency to verify whether the implementing country has complied with all of the requirements in the EITI Standard. Once the validator has completed its review, it submits a report to the EITI board with an assessment of whether the country has met the requirement, not met the requirement but made meaningful progress, or not met the requirement with no meaningful progress.

The EITI board, through its validation committee, reviews the validator’s report. Where validation verifies that a country has met all of the requirements the EITI board designates that country as EITI-compliant. EITI-compliant countries are required to undertake validation every three years.

CIVIL SOCIETY PARTICIPATION

Since its inception, the EITI has held to the principle that “all stakeholders have important and relevant contributions to make to advance the EITI principles and standards.” Not only does the EITI Standard require that all country implementation decisions are made through the MSG, but it also requires that civil society has the ability to fully, independently, actively and effectively participate. The EITI Standard contains numerous requirements related to civil society participation. All such requirements are continuing obligations; that is, the requirements must be met by countries at candidacy, throughout implementation, at validation and after obtaining compliant status. The EITI Standard also requires that there must be an enabling environment for civil society participation with regard to relevant laws, regulations and administrative rules, as well as actual practice in implementation of the EITI. And civil society organizations must be

“The EITI Standard requires that civil society has the ability to fully, independently, actively and effectively participate in the process.”

able to speak freely on transparency and natural resource governance issues. Concerns about restrictions on civil society participation in an EITI-implementing country can be raised with the EITI board's Rapid Response Committee. An updated Civil Society Protocol will come into force in 2015, providing more detailed guidance on how the civil society requirements will be assessed.

Case study: Liberia

In 2009, the Liberia Extractive Industries Transparency Initiative Act (LEITI) established the EITI process into national legislation. The LEITI requires disclosure of revenues and payments from the extractive industries, as well as agriculture and forestry. In addition to information about revenues, LEITI requires disclosure of all contracts in the sector and has started disclosing information about the ownership of companies.

LEITI has had positive repercussions far beyond the broad collection and publication of figures. In a country with a violent recent history, the EITI has been able to promote trust between wary stakeholders and made it easier for people to ask the government how money is collected and used. As noted by the Liberian Senator Milton Findley, the EITI process has cut out the suspicion, gossip and hearsay that have plagued previous administrations. Furthermore, by being apolitical, the report is trusted by all stakeholders working toward a common end. Finally, the report has been used by local communities and companies to foster trust, demonstrate social impacts and ensure better local revenue distribution.

BENEFITS OF ENGAGING WITH THE EITI

As of October 2014, there are 31 compliant countries and 17 candidate countries. Lessons from these country experiences illustrate that EITI can be a valuable tool for oversight and reform, or it can be a superficial “box-ticking” exercise. When used as a valued tool, it can:

- **Inform oversight.** Analysis of the information in EITI reports can help identify governance weaknesses, which can help stakeholders monitor the management of the oil, gas or mining sectors and develop recommendations for policy reform.
- **Inform sector lawmaking.** EITI reports can shed light on the allocation of extractive rights, the functioning of state-owned companies, the effectiveness of revenue collection, and shifts in production—all factors that can inform lawmaking.
- **Inform annual appropriation decisions.** EITI reports, particularly if detailed and maintained regularly over time, can lift the veil on where revenue amounts come from and how they are likely to vary from year to year.
- **Ensure the government is working in the public interest.** The general public, civil society and media can ensure the government is getting a good deal for the country's natural resources and allocating extractives revenues for the public good.
- **Root out or uncover corruption.** EITI reports can help in overcoming systemic corruption or misappropriation of funds.

“Analysis of the information in EITI reports can help identify governance weaknesses, which can help stakeholders monitor the management of the oil, gas or mining sectors and develop recommendations for policy reform.”

NRGI'S INTERACTIVE GUIDE TO THE EITI

NRGI has developed an easy-to-use interactive guide on the EITI standards and how the EITI can generate meaningful information that improves natural resource governance. For each policy issue covered by the EITI, the guide provides an overview of the issue and why it matters, explains the reach of the EITI requirements, and provides recommendations, examples and references for further reading. The guide also contains a complete slide set for training purposes. See more at resourcegovernance.org/eitiguide.



Figure 3. NRGi's interactive guide to the EITI

Source: NRGi

QUESTIONS TO ASK

- If information from extractive companies and government agencies is not publicly available in my country, would the EITI be useful?
- If the government is implementing EITI, at what stage of the process is it? Are EITI reports disclosing information that is relevant to the most pressing governance challenges in the country? Are EITI reports being analyzed and used in policymaking?
- Has the multi-stakeholder group been established? Is it equipped to perform its mandate? Has civil society been a part of the process?
- Is civil society able to meaningfully participate in discussion about natural resource governance in my country? If not, what would need to be changed for this to happen?

ADDITIONAL RESOURCES

EITI, *The EITI Standard* (2013), available at: https://eiti.org/files/English_EITI%20STANDARD_11July_0.pdf

NRGI, *Using EITI for Policy Reform: NRGi Guide to the EITI Standard* (2014), available at: <http://www.resourcegovernance.org/eitiguide/#>

More information about implementation in various countries can be found on the EITI website at: <https://eiti.org/countries>

The Natural Resource Governance Institute, an independent, non-profit organization, helps people to realize the benefits of their countries' oil, gas and mineral wealth through applied research, and innovative approaches to capacity development, technical advice and advocacy.
Learn more at www.resourcegovernance.org



Publish What You Pay

A Civil Society Coalition for Extractive Sector Transparency and Accountability

KEY MESSAGES

- Transparency is a fundamental requirement for tackling corruption, fraud and poor governance, all of which can prevent a country from realizing the opportunities offered by natural resource development.
- NRGI and Publish What You Pay campaign for increased transparency in a range of areas, and a number of governments are responding to calls for increased disclosure.

WHAT IS PUBLISH WHAT YOU PAY?

Publish What You Pay (PWYP) is an international coalition of more than 800 civil society organizations calling for transparency and accountability in the extractive sector. Launched in 2002 in response to instances of corruption and mismanagement, PWYP ultimately seeks to facilitate an environment in which oil, gas and mining revenues are used to improve the lives of women, men and youth in resource-rich countries.

This reader provides an overview of the PWYP coalition, including its organizational structure and main objectives. It should be read in conjunction with the reader on transparency movements and mechanisms.



HOW IS PWYP ORGANIZED?

The international coalition of PWYP is governed through a *Global Steering Committee* (GSC) elected every three years at the International Coalition Strategy Meeting. The Global Steering Committee is a 10-person panel comprised of regional representatives and donor organizations. The GSC oversees the work of the international secretariat. The secretariat, which is based in London, is led by the international director and a staff of approximately 10 people.

Organizations can join the international coalition as members directly or through national and regional coalitions. In more than 40 countries, groups of civil society organizations have chosen to form national coalitions that organize around advocacy and capacity-building goals. In many countries, these coalitions are supported by a

“The government should disclose information about the whole chain of decisions, with a complete, complementary set of information. For instance, revenue data might be accompanied by information on the applicable tax rates and taxable income. Such information should be disclosed at an appropriate level of disaggregation such as location, project and product type.”

– Natural Resource Charter, Precept 2

This reader is intended for use in conjunction with Precepts 2 and 11 of the Natural Resource Charter.

secretariat overseen by a steering committee. Thirty coalitions have hired a national coordinator to help facilitate work between civil society groups and maintain a consistent voice for advocacy. Regional coalitions garner representatives from national coalitions as well as some organizations in countries without national coalitions.

PWYP's membership includes several leading global organizations campaigning on natural resource governance, including NRGI, Global Witness, Oxfam America and the One Campaign.

WHAT IS PWYP'S GOAL?

PWYP aims for citizens in resource-rich countries to experience sustainable benefits from their natural resources. PWYP sees transparency as a key means to hold governments and companies to account for their role in managing natural resources. PWYP's work spreads across the "chain for change" with concentration in three main pillars:

- **Publish Why You Pay and How You Extract.** This campaign asks for decisions to extract to be made in a transparent and accountable manner that allows benefits for all citizens. Part of this effort is a call for contract transparency and disclosure of audited information about what minerals are extracted.
- **Publish What You Pay.** The initial ask of the coalition focuses on revenue transparency—for companies to publish what they pay and governments to publish what they receive. This is often linked closely with the Extractive Industries Transparency Initiative (EITI). Another venue for revenue transparency are mandatory disclosure requirements. These requirements make it necessary for publicly listed companies to disclose information about their revenues.
- **Publish What You Earn and How You Spend.** Here PWYP seeks information about how governments and companies spend revenues. This looks to annual government budgets as well as corporate social responsibility spending.

"Publish Why You Pay calls for contract transparency and disclosure of audited information about what minerals are extracted."

WHO FUNDS PWYP?

PWYP receives the majority of its funding from the Open Society Foundations and the Hewlett Foundation. The remainder of funds come from a variety of civil society organizations, donor branches of governments, and other foundations.

Case study: PWYP Canada's fight for mandatory disclosure

PWYP Canada was established in 2008 and has grown to include 15 member organizations. With Canada home to approximately 60 percent of the world's mining companies and over a third of the world's oil and gas companies, transparency of operations and revenues there could have a watershed impact of the industry. As a result, the coalition has prioritized creating mandatory reporting obligations as an advocacy objective.

In 2013, the government of Canada pledged at a G8 summit that it would establish mandatory reporting requirements. The PWYP coalition has been intimately involved in discussions with the government since the announcement, seeing it as a key opportunity for Canada to position itself as a leader by establishing strong mandatory reporting standards. In addition to serving on a multi-stakeholder roundtable about potential requirements, the coalition published a detailed report providing recommendations of the key features necessary for the law to serve its purpose. When the legislature proposed a law in 2014, PWYP Canada promptly responded with analysis and recommendations. It called for the law to require financial reporting to be *disaggregated* on a project-by-project basis.

In the meantime, PWYP Canada published a guide for how to find information about mining companies and their operations that is already available on the stock exchange. PWYP Canada has worked to train PWYP coalitions in other countries where Canadian companies operate to access information about the companies' operations.

QUESTIONS TO ASK

- Is there a PWYP coalition in my country? If so, how is it structured, and who leads the group?
- If not, does my organization agree with the aims of PWYP? Are we interested in joining?
- Is my government meeting the policy demands of PWYP?
- What other countries influence the extractive industries in my country? Are there organizations in those countries that are part of PWYP that I could collaborate with?

ADDITIONAL RESOURCES

Natural Resource Charter, Precept 2, 11, available at: http://www.resourcegovernance.org/sites/default/files/NRCJ1193_natural_resource_charter_19.6.14.pdf.

PWYP Passport, available at: <http://extractingthetruth.org/extractingthetruth.html>.

PWYP's Chain for Change, available at: <http://chainforchange.org.uk/>.

Parham, Henry, and Mabel van Oranje, Publishing What We Learned (2009), available at: <http://www.publishwhatyoupay.org/en/resources/publishing-what-we-learned>.

NRGI readers on EITI, Contract Transparency, and Transparency Movements and Mechanisms.

The Natural Resource Governance Institute, an independent, non-profit organization, helps people to realize the benefits of their countries' oil, gas and mineral wealth through applied research, and innovative approaches to capacity development, technical advice and advocacy.
Learn more at www.resourcegovernance.org

Granting Rights to Natural Resources

Determining Who Takes Natural Resources Out of the Ground

KEY MESSAGES

- Countries should put in place a reliable and consistent mechanism for keeping track of who has rights to extract minerals and access land.
- Governments can give rights to companies to extract minerals through bilateral negotiations or competitive tenders.
- Transparency is fundamental. When going through the process of awarding contracts and licenses, all bidders should have access to the same information.
- Information about the companies themselves must also be as transparent as possible, including information about who ultimately owns them.
- When companies are given rights to land, they must fairly and transparently compensate landowners.

“The government should encourage efficient exploration and production operations, and allocate rights transparently.”

– Natural Resource Charter,
Precept 3

THE GOALS OF ALLOCATING RIGHTS

In most countries, the law or constitution makes it clear that the state is the owner of all minerals under the ground. Countries often give companies the rights to explore and exploit mineral resources so that the state can benefit from the capital, technical expertise and experience of private extractive companies. When the companies invest in exploration for minerals, countries also benefit by avoiding the financial risk associated with the initial exploration process. This reader describes the processes by which governments decide which companies can have the rights to extract minerals, oil, and gas, and on what terms.

Licenses and *contracts* are the legal documents that govern the rights and responsibilities of the government and companies during extractive projects. A *license* (synonym: permit) is a standard-form legal document that the state uses to grant exploration or extraction rights according to a generally applicable set of terms, with limited variation from one project to another. As discussed in the reader on legal frameworks, the general terms of a license are usually set forth in laws or regulations. A *contract* (synonym: agreement) is a negotiated accord in which both parties agree to a set of obligations to each other. Contracts are often created from standard templates, but in contrast to licenses many resource-rich countries negotiate contracts that deviate substantially from potentially applicable rules in the laws, regulations, or model contracts.

This reader is intended for use in conjunction with Precept 3 of the Natural Resource Charter.

How governments decide which companies will have the right to extract and on what terms is referred to as *licensing* or *allocating rights*. A government often has several goals when entering into a licensing process:

- **Pick the right company.** Mineral and oil extraction is a long-term process and it is in the country's interest to have a good partner. Some companies are more effective and efficient in extracting minerals. Others purchase extraction rights to speculate on their value. If a company purchases rights, but does not efficiently extract the resources, the country might not fully benefit.
- **Get the best terms for the state.** The government wants the best deal possible, but it is often very difficult to determine what the best deal is because of large numbers of terms and inherent uncertainty in extractive industries. The ideal licensing process will make it clear to the government what the best terms are for a particular project.
- **Limit or eliminate corruption.** Licensing processes can be rife with corruption that takes benefits away from the country and puts them in the hands of an elite few. A strong licensing process brings transparency and makes it more likely that rights are allocated based on merit.
- **Reflect broader sector goals.** If the government already has a national policy for its goals for mineral or oil extraction, officials must ensure that any new extractive project is in line with those goals. They must also ensure that the project terms do not undermine future deals.

“Mineral and oil extraction is a long-term process and it is in the country's interest to have a good partner.”

While most licensing takes place at the national level, some countries with highly decentralized or federal forms of government involve states and provinces in the allocation of rights.

THE PROCESS

There are two common processes for allocating rights: bilateral negotiations and competitive tenders.

In *bilateral negotiations* (also called *open door processes*), two parties, usually a government and a corporate bidder, come together without an open competition. Initially, government officials determine whether the company has the minimum technical and financial capabilities to take on the project. They also assess whether the terms proposed by the company warrant granting the company the right to explore and/or exploit. If these thresholds are satisfied, government representatives proceed to negotiate the terms of an agreement with the company.

In *competitive tenders* (including *auctions*), the government makes a public call for companies to submit bids, opening the opportunity to bid to more than one party. Often the government sets out criteria that bidders need to meet in order to be allowed to participate. The process of deciding whether companies meet the criteria to bid is called *pre-qualification*. When bidders need to be pre-qualified, the bid is *restricted*. Restricted bids are common in the petroleum industry due to the high level of technical skill required to execute a project.

Open door vs. auctions

The quality of geological information can often impact which process of allocating rights is most beneficial to the government.

When significant geological data is available and investor interest is high, a competitive auction is generally considered the best option. In auctions, investors compete against one another, leaving the government in a stronger negotiating position. When there is enough information, auctions result in terms that are often a better indicator of the actual value of the deposit than what the government could calculate internally. Competitive tenders also can include built-in transparency provisions that increase the likelihood that awards will be based on objective criteria rather than political patronage.

In contrast, when geological information is limited or not immediately encouraging, governments may decide to adopt an open-door, first-come, first-served licensing procedure, or to engage in direct negotiation with a limited number of companies. The lack of information increases the risk for the companies and often makes it less likely that there would be enough bidders to foster strong competition. Though the typically scant information available in the mining sector has made it particularly oriented around bilateral negotiations, recent improvements in technology have allowed more mineral-rich countries, like Peru and Afghanistan, to try auctions for mineral projects.

“When significant geological data is available and investor interest is high, a competitive auction is generally considered the best option.”

The steps in a typical restricted bid are depicted in the graphic below. To begin, government officials must decide what *blocks*, or segments of land or ocean floor, are going to be available and what terms are going to be open for negotiation. The government will then promote the bidding and ask parties to express interest. Next, during the pre-qualification stage, governments will determine whether the interested parties meet the relevant criteria. The government will then invite qualified parties to bid. After receiving the bids and comparing the benefits, the government will issue a license and/or sign a contract with the winner. Many governments aim to include all *variable terms*, or terms that are not fixed by law, in the bidding process to eliminate the need for post-bid-negotiation. In some countries, however, the government and the companies conduct negotiations after the bid is accepted to finalize all the terms.

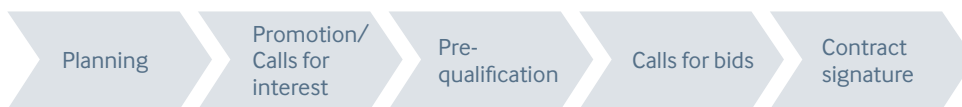


Figure 1. Steps in a typical restricted bidding process

TERMS OF AGREEMENT

In countries that use contracts (as opposed to licenses), the goal of both open door and competitive licensing processes is a contract that is in the best interest of the people while ensuring a sufficient return to the investor. What is included in that agreement, or the *terms*, may vary from project to project but generally includes information about the timetables and processes for project implementation; fiscal terms for sharing revenues between the company and the state; requirements for local economic development or infrastructure; health and safety standards for labor, social and environmental responsibilities; and the process for oversight of obligations by the government.

In auctions, the bidding terms may vary. Some terms may be *fixed*, which means they are prescribed either by law or the terms of the auction. Other terms are *variable*, and the

bidding companies are required to submit their offer for those terms. In some cases all of the financial terms are fixed, requiring the companies to bid simply on the amount of work and production they will undertake. It is easier for governments to make comparisons across bids when the auction rules limit the competition to a few variable terms.

TRANSPARENCY AND GOOD GOVERNANCE

A sound licensing regime is the first step toward effectively capture of economic benefits from extraction. A mineral licensing system is most effective in the context of a clear legal and regulatory framework with well-defined institutional responsibilities and procedures. By improving the selection of partners, an effective licensing system can minimize the risks of working with companies that will sit on mineral deposits, without developing them, purely for speculation.

Transparency is at the core of good practice when it comes to license/contract award procedures. The government should make license applicants—on a non-discriminatory basis—fully aware of the procedures to be followed. It should also provide them with access to all available data, whether on a free or purchase basis, and inform them of all applicable laws. Documentation should also provide assurances that areas offered for license are currently unlicensed and that proper authority exists for their licensing. With the possible exception of specific technical data, this information should be available in the public domain.

Disclosure by the government to the public of the criteria upon which licenses were awarded is a critical step to foster citizen trust and accountability. The disclosure of all license holders, including the *beneficial owners* (the individual or individuals who will actually benefit from the profits of the company) is also important for effective oversight by government authorities and citizens. Easy access to information about beneficial owners guards against the misuse of *shell companies* to allocate licenses to politically

“Transparency is at the core of good practice when it comes to license/contract award procedures.”

Case study: Competitive, open auctions in Iraq

In June 2009, the Iraqi government held a series of open, transparent and competitive bidding rounds to allocate service contracts for the right to extract oil. The agreements reached were considered a huge success in a country with a challenging operating environment. Companies bid fiercely, and ultimately settled for service contracts paying them far less per barrel of oil extracted than what they had proposed in the initial bids.

Due to the competitive nature of the process, the bidders drastically reduced the remuneration fees that the government would owe them under the contract. For example, the winning bid for the Rumaila oil field, led by China National Petroleum Corporation and BP, was 58 percent cheaper than the bid by ExxonMobil, and almost 50 percent less than BP’s initial bid. Given the large difference between BP’s opening bid and its winning bid, approximately \$750 million extra would accrue to Iraq per year from the Rumaila oil field. (Note: this figure is calculated using oil prices at the time of the bid.)

Though many terms were decided through the open bidding process, some were left to subsequent closed-door negotiations. In these negotiations, the government of Iraq agreed to bear much of the cost if there were OPEC quota restrictions, problems with exports, natural disasters, or war that disrupted production. In doing so, the government took on more risk than the risk level envisaged in Iraq’s model contract, which shares split the costs of the risks for these events between the parties. In addition, a provision that would hold the company liable for exploiting the reservoirs too quickly or inefficiently was removed from the model contract.

exposed individuals. Countries that implement the Extractive Industries Transparency Initiative (EITI) must publish a registry that includes all license holders and the location and duration of licenses. The EITI also requires governments to publish information on licensing processes and encourages the publication of information on beneficial ownership.

Beyond transparency, it is good practice to introduce legal limits to discretionary powers of the authority in charge of awarding licenses or contracts. This helps prevent abuses and reduces room for corruption.

KEEPING TRACK OF LICENSES

A *mineral cadastre* is a public institution responsible for managing applications, granting mineral rights, maintaining the registries, and controlling the timing and validity of licenses. Cadastres are important for keeping track of who has rights to what, and for creating a well-organized and stable environment for investment. How the information is organized and the extent to which it is publicly available varies from country to country. Some countries have invested in technology that links licensing information to geospatial data. This can result in helpful maps, often available online, that show what types of licenses are available where. Some of the most sophisticated versions have an interface that allows the user to click on a license to get more information about the terms and ownership.

“Cadastres are important for keeping track of who has rights to what, and for creating a well-organized and stable environment for investment.”

Land rights

Even though the state may be the owner of underground assets, a licensing system must still take into account the owners of the land above the ground. In order for extractive companies to get the resources out of the ground, they must have access to land for excavation and distribution operations. If the government does not already own the land, it often tries to gain ownership through a process of *expropriation*, known in some countries as *eminent domain*. *Expropriation* means the government seeks to become the owner of the land so that it can use it for the public good, in this case selling natural resources. In other cases, even if the state does not expropriate the land, the government and extractive companies have mechanisms to obligate the land owners to allow for exploration or exploitation on their property. International law and most constitutions require that the government provides fair compensation to land owners. According to international law and standards, the compensation should include payment for the value of the land, payment for the value of any improvements or structures on the land, and compensation to address loss of connection to roads, livelihoods and ancestral lands. This resettlement and compensation process is usually undertaken by government and company officials. When executed poorly, it can be a source of local consternation and undermine the company's *social license to operate*. The process can be complicated when the government does not already have clear documentation of ownership.

QUESTIONS TO ASK

- How does my country keep track of licenses and contracts? Is it a reliable, accessible system?
- How are licenses usually allocated in my country: by auction or by open-door negotiation?
- When considering allocating a license, is interest high enough to warrant an auction? Or should exploratory work be done first in order to provide more geological data?
- Is the bidding process being implemented open, fair and transparent?
- What information is the government making available to bidders? Is the same information equally available to all bidders?
- What is the process for providing land rights to the extractive companies? Are those who are being resettled receiving fair compensation?

ADDITIONAL RESOURCES

Natural Resource Charter, Precept 3.

Campton, Peter, chapter 5, “How to Best Auction Oil Rights,” in *Escaping the Resource Curse* (Humphreys, M., Sachs, J.D., Stiglitz, J.E., eds., New York: Columbia University Press, 2007).

Oil Contracts: How to read and understand them (OpenOil, 2012), available at: <http://openoil.net/contracts-booksprint/>

Mining Contracts: How to read and understand them (2014), available at: <http://www.resourcecontracts.org/blog/guides-to-contract-terminology.html>

The Natural Resource Governance Institute, an independent, non-profit organization, helps people to realize the benefits of their countries' oil, gas and mineral wealth through applied research, and innovative approaches to capacity development, technical advice and advocacy.
Learn more at www.resourcegovernance.org

Fiscal Regime Design

What Revenues the Government Will be Entitled to Collect

KEY MESSAGES:

- The fiscal regime is the set of tools that determine how the revenues from oil and mining projects are shared between the government and companies.
- There are a variety of fiscal tools that can be used to create a fiscal regime to govern oil and mining projects, including royalties, taxes, production sharing, and bonuses.
- Which fiscal tools a government chooses to employ for its oil or mining sectors depends on balancing a number of factors, including when the state hopes to receive the revenues, how to share the investment risk, how to respond to changes in profitability, and how strongly to promote new investments.
- Some companies, like many taxpayers, use loopholes to try to lessen the amount they are required to pay to the government. A strong fiscal regime can be designed to avoid some of these loopholes.

“Natural resource development may provide employment and other returns, but its principal benefit is the generation of government revenues to support development and the well-being of citizens. Realizing these revenues requires a well-designed fiscal system that takes into account the nature of extractive resources, the considerable uncertainties inherent in their exploration, and the capacities of the government.”

– Natural Resource Charter, Precept 4

FISCAL REGIMES FOR OIL AND MINERALS

A *fiscal regime* is the set of instruments or tools (taxes, royalties, dividends, etc.) that determine how the revenues from oil and mining projects are shared between the state and companies. This reader discusses the factors governments consider when selecting fiscal tools, what types of fiscal tools governments often use, and the common loopholes or pitfalls with different fiscal tools.

The details of what fiscal tools are used and how they are applied to a particular mining or oil project are part of a country’s *legal framework*, which includes the laws, regulations and contracts. There are many considerations a country makes in determining which fiscal tools to use and how to use them. While the government may have preferences, it must also respond to the needs of the companies if the state wants to attract investment. Some of the broad considerations include:

- **What is the timing of the revenues?** Some fiscal tools provide governments with more money early in the life cycle of an extractive project, while others do not deliver significant revenues until the project has already turned a profit, which can take years. For example, signature bonuses represent revenues early in the extraction project, called *front-end loaded*, while profit-based taxes tend to be *back-loaded*.

This reader is intended for use in conjunction with Precept 4 of the Natural Resource Charter.

- **How does the government revenue change when profitability changes?**

As commodity prices, production techniques and production rates change over time, so does the profit margin for the project. The impact that a fiscal tool has on government share of the profits when the project's profit margin increases can be placed into one of three categories. *Neutral* fiscal tools give the state the same share of revenue whether profitability increases or decreases. *Progressive* fiscal tools give the government a larger share of the profit when profits increase. *Regressive* fiscal tools give the government a lesser share as profits increase.

Each option can be beneficial depending on the desired outcome. The steady flows of revenues that come from neutral or regressive fiscal tools can help governments with weak auditing capacity increase collection and ensure that they receive revenues earlier in the project life cycle. However, regressive or neutral tools can discourage investment, particularly for projects with small profit margins, because they require companies to pay the state even when the costs of extraction are greater than revenues. Progressive fiscal tools, by contrast, are seen to protect the interests of companies during periods of low profitability while giving the government an ability to capture a significant share of windfalls when profits are high. These progressive tools, however, are frequently more difficult to enforce effectively, because they require an ability to audit costs and calculate profits.

- **Who carries the risk?** Not all extraction projects are successful. Fiscal terms are usually agreed to very early in the project, before extraction is underway. A company's investment in the expensive infrastructure and supplies necessary to extract natural resources represents a risk, as the investment may not equal future profits. With some fiscal packages, a government shares more of the risk with the company than others and is subject to losses when a project is not profitable.

Governments can consider these broad issues and then choose a combination of fiscal tools that meet their objectives. The industry often uses a shorthand by referring to the *government take* and the *company take*. Though it is tempting to simply compare different countries' government take, it is very complicated to determine whether a government take is fair or good for a particular contract. The type of mineral being extracted, the quality of the crude or ore, and the costs of developing a project vary greatly and have a large influence on government take. Establishing a transparent fiscal system enables better oversight by government agencies, civil society organizations and parliament.

“Progressive fiscal tools protect the interests of companies during periods of low profitability while giving the government an ability to capture a significant share of windfalls when profits are high.”

FISCAL TOOLS

As stated above, not all fiscal tools are equal. A 5 percent royalty is not equal in revenues or timing to a 5 percent corporate tax. The chart below explains some of the most common fiscal tools.

Fiscal tool	Explanation	Example
<p>Royalties</p>	<p>A payment made in reference to the amount and value of the mineral produced. The most common form of royalties, called <i>ad valorem</i>, collect revenues based on percentage of the value of the resource extracted. This percentage is usually applied to the gross value of production, without accounting for production costs. Most royalties are regressive, because they result in a greater burden for companies in a lower-profit context. Some countries use progressive <i>sliding scale royalties</i>, which adjust the percentage of government take based on measures of the profitability of the project.</p>	<p>“The Investor shall pay a royalty under Article 47.3.2 of the Minerals Law at the date of this Agreement equal to 5% of the sales value of all Products mined from the Contract Area that are sold, shipped for sale, or used by the Investor....” –Mongolia Oyu Tolgoi contract (2009), art. 3.13</p> <p><i>Royalty = (Percent) x (Assessed Sales)</i></p>
<p>Corporate income taxes</p>	<p>Taxes are assessed as a percentage of the net profits of a project after deducting allowable expenses. These vary most often based on what deductions are allowed and how they are calculated and monitored.</p>	<p><i>Corporate or Profit Tax = (Project Revenues - Allowable Deductions) x (Tax Rate)</i></p>
<p>Bonuses</p>	<p>A lump sum payment is required at a specified point in the project timeline. Some bonuses are paid at signature, while others are designed to bring revenues when certain production levels are met. They typically provide a front-loaded payment, which the company must pay whether or not the project proves profitable.</p>	<p>“(a) an amount of one million US Dollars (US \$1,000,000) to be paid in respect of each Commercial Discovery within thirty (30) days after Commercial Production Start Date of such Commercial Discovery; and (b) an amount of five million US Dollars (\$5,000,000) upon achieving cumulative production of one hundred million (100,000,000) Barrels of oil equivalent from each Commercial Discovery....” –Libya Exploration and Production Sharing Agreement</p> <p><i>Bonus = Bonus Amount</i></p>
<p>Withholding taxes</p>	<p>Withholding tax represents tax on payments that extraction companies make to their lenders, owners (in the form of dividends) and subcontractors. A common practice is for companies to be required to withhold a share of payments to these third parties and transfer it to the government. This makes it possible for the government to tax third parties who may not be based in the country but are profiting from the project.</p>	<p>“...[T]he Concessionaire shall withhold tax on payments made to non-residents and residents at the following rates for the first 12 Years: (i) Dividends, 0 percent; (ii) Interest, 5 percent; (iii) Payments for services, 5 percent.” – Liberia-China Union (2009), sect. 14.3(c)</p> <p><i>Withholding Tax = (Payment to Third Party) x (Withholding Tax Rate)</i></p>

<p>Production sharing</p>	<p>These arrangements, which are most common for oil projects, establish formulas for the sharing of physical production of oil and gas between the private investor and the state (often through a state-owned enterprise). A typical production sharing arrangement first allocates some portion of oil back to the contracting company to recoup its costs (<i>cost oil</i>). The remaining <i>profit oil</i> is then split between the contracting company and the state, usually according to a sliding scale based on the level of production or the profitability of the project.</p>	<p>See figure1 for an illustration of revenue flows in a production sharing contract.</p> <p><i>Government Share of Profit Oil = (Production - CostOil - Royalty) x (Government Share)</i></p>
<p>State equity participation</p>	<p>A state may purchase or negotiate shares in an oil or mineral project. Equity gives the state either a share in the distributed profits of a company or the right to distribute some portion of the petroleum or mineral output. It may also entail additional obligations by the state and could increase the government’s share of the risk.</p>	<p>“[The National Oil Company] shall have the right to demand from CONTRACTORS that a ten percent (10%) undivided interest in the total rights and obligations under this Contract be offered to either itself or a [company]... designated by Pertamina...” –Indonesia Yapen Contract (1999), section 16.1</p> <p><i>Dividend = (Percentage of declared dividends to which company is entitled on the basis of its equity stake, sometimes minus reimbursement of accrued costs that were paid by the contracting company on the state’s behalf)</i></p> <p>or</p> <p><i>Dividend = (Contracting Company Share of Profit Oil x Equity Participation Percentage, sometimes minus reimbursement of accrued costs that were paid by the contracting company on the state’s behalf)</i></p>
<p>Resource rent taxes</p>	<p>Designed to capture part of the excess profit that can arise when international prices of resources soar. These are also known as windfall profit taxes. They are designed to be progressive.</p>	<p>Brazil has a <i>special participation</i>, which allocates a larger share of <i>net income</i> to the government as the production rate increases. Similarly, Ghana’s <i>additional oil entitlement</i> gives a larger share of the oil production to the government as the company’s rate of return increases.</p>
<p>Surface rental payments</p>	<p>Payments to the central, or sometimes subnational, government based on a fixed or per acre fee.</p>	<p>“The Investor shall pay an annual mining license fee of USD15.00 per hectare of mining area granted under a Mining License, and Stabilized.”</p> <p>–Mongolia Mineral Law (2006), art. 13.14</p> <p><i>Surface Rent = (Rate per Acre) x (Number of Acres)</i></p>

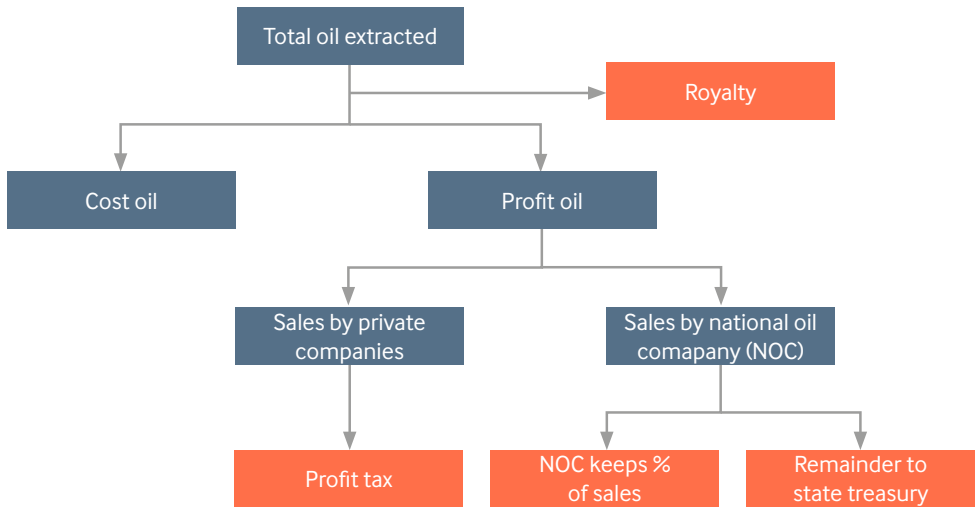


Figure 1. Typical revenue flows in a production sharing contract (PSC)

(Orange indicates revenue flows to the government)

Source: NRGi

HOW THEY FIT TOGETHER: DESIGNING THE FISCAL REGIME

The fiscal regime represents the choices a government makes about which fiscal tools to use to divide revenues from a particular extraction project. As discussed above, these tools may be enshrined in legislation or agreed to on a project by project basis in individual contracts. Laws that are specific to the industry, such as the mining law or petroleum act, often set out some of the fiscal tools, but general legislation, such as the tax law, may also set specific fiscal tools. The total government revenue is calculated by adding up the government revenue from each of these fiscal regimes. If a country publishes EITI reports with revenue information disaggregated by revenue stream per project, such as in Zambia, it is possible to see how each fiscal tool adds to the overall government take.

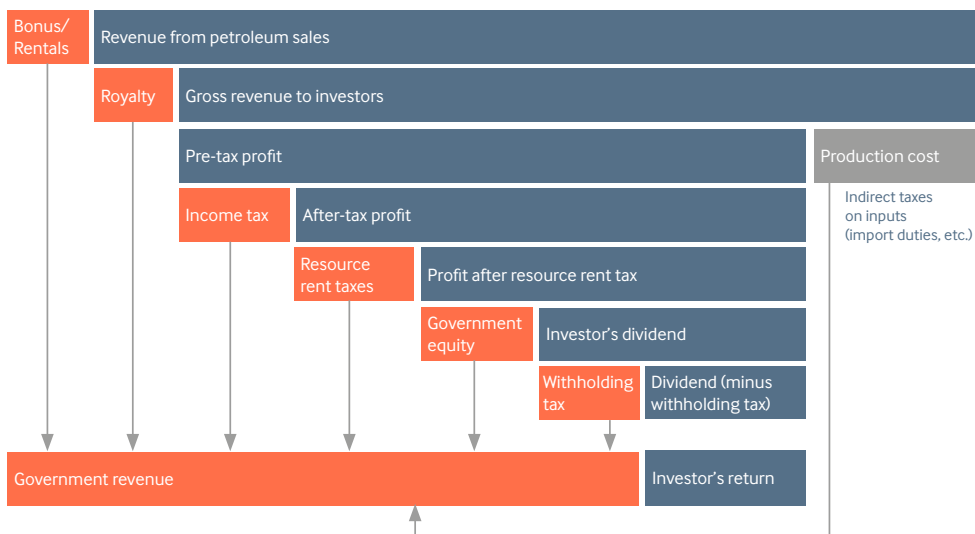


Figure 2. Revenue flows in a tax and royalty system

Source: NRGi elaboration

LOOPHOLES AND PITFALLS

The fiscal tools above represent the government’s vehicles for collecting revenues from the extraction project. Like many taxpayers, some companies will try to minimize the amount they must pay for the government using various loopholes. Below are a few common loopholes that companies try to exploit.

Common loophole	Explanation
Transfer pricing	<p>Transfer pricing occurs when taxable income is shifted from a relatively high to a relatively low tax jurisdiction. Transfer pricing in the extractive industries typically takes one of two forms. First, the subsidiary in a resource-rich country may sell its oil or minerals to a sister company at an artificially low sales price in order to reduce its declared revenues and thus the size of its royalty or income tax obligations within that country. Second, the subsidiary within the resource-rich country may purchase goods and services from a sister company at an inflated price, thereby increasing its declared costs and decreasing its declared profits within the resource-rich country. A multi-national enterprise may seek to shift taxable income to its home country (if tax rates are lower there or the government provides special tax incentives) or to a tax haven country. Governments can reduce the risk of transfer pricing on the revenue side by requiring commodity sales to be accounted for tax purposes using objective market prices rather than the sales value declared by companies.</p> <p>In the example in figure 3, the Angolan subsidiary buys inputs above market level from the British Virgin Islands based subsidiary. This could be anything from management fees to high-interest loans or equipment. The Angolan firm then sells its minerals to the U.K. subsidiary at below market value. At the end of the day, only a tiny amount of taxable profit remains in Angola; the rest has been transferred out through this pricing strategy.</p>
Thin capitalization	Thin capitalization frequently occurs when the interest payments that a company makes on loans are tax deductible. This can encourage a company to finance a project with a large amount of debt (including debt from related companies), allowing the company to inflate its interest deductions and reduce taxable income. States can adopt rules to limit interest deductions to a reasonable level to prevent the loss of tax revenues.
Production costs	Companies can decrease revenue to the government by increasing production costs. This can be done through <i>gold plating</i> , spending more on production than is necessary, or inaccurate accounting. Countries can reduce this risk by developing rules that encourage efficient production and closely auditing the company’s production costs. Another way companies can decrease government revenues is by deducting costs incurred on a project from the taxable income of another project. A company may have legitimate reasons to do so, especially if it is engaged in several exploration or development efforts within the same country. But such tax-based incentives can distort company behavior and detract from the economic interests of the state. Some countries seek to prevent this practice by mandating <i>ring fencing</i> , which allows a company to apply the production costs only against the taxable income of the same project. Other countries choose not to ring fence so that they can encourage investment in new mines.

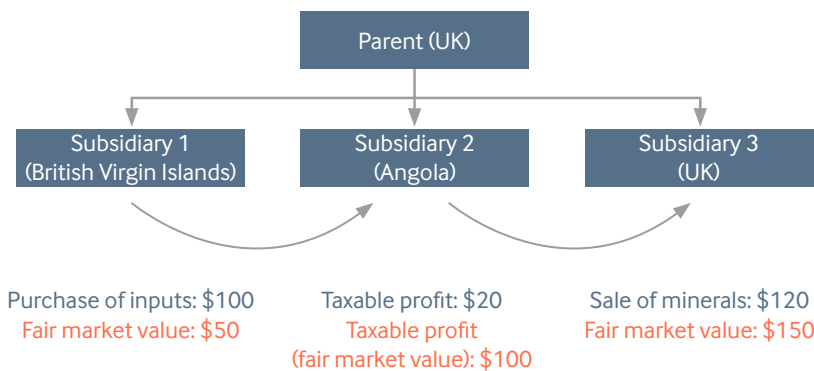


Figure 3. Illustration of transfer pricing

Source: NRGi

QUESTIONS TO ASK

- What fiscal tools are used in my country?
- What do the fiscal tools allow for in terms of timing, share of revenue as profits increase, share of risk and encouragement of other investments?
- Does the fiscal regime for the extractive industries benefit from a clearly defined set of legislation and policies, or is it negotiated on a case-by-case basis? If is it the latter, why is it not standardized?
- Are policymakers aware of the various fiscal options and legislative tools available to obtain revenues from natural resource development?
- Is the fiscal regime adapted to avoid common pitfalls and loopholes often exploited by companies?
- Are policymakers able to monitor the fiscal regime? Do they have the training and knowledge to estimate revenues the government should be receiving?

ADDITIONAL RESOURCES

Natural Resource Charter, precept 4 http://www.resourcegovernance.org/sites/default/files/NRCJ1193_natural_resource_charter_19.6.14.pdf.

Numerous contracts are available at <http://www.resourcecontracts.org> where you can compare the fiscal terms between different agreements.

Oil Contracts: How to read and understand them (OpenOil, 2012), available at: <http://openoil.net/contracts-booksprint/>.

Mining Contracts: How to read and understand them (2014), available at: <http://www.resourcecontracts.org/blog/guides-to-contract-terminology.html>.

Ernst & Young, *Global Oil and Gas Tax Guide* (2013), available at : [http://www.ey.com/Publication/vwLUAssets/2013_global_oil_and_gas_tax_guide/\\$FILE/EY_Oil_and_Gas_2013.pdf](http://www.ey.com/Publication/vwLUAssets/2013_global_oil_and_gas_tax_guide/$FILE/EY_Oil_and_Gas_2013.pdf) (provides country by country tax information).

PricewaterhouseCoopers, *Corporate Income Taxes Mining Royalties and Other Mining Taxes: A summary of rates and rules in selected countries* (2012), available at: http://www.pwc.com/en_GX/gx/energy-utilities-mining/publications/pdf/pwc-gx-mining-taxes-and-royalties.pdf.

The Natural Resource Governance Institute, an independent, non-profit organization, helps people to realize the benefits of their countries' oil, gas and mineral wealth through applied research, and innovative approaches to capacity development, technical advice and advocacy.
Learn more at www.resourcegovernance.org



Oil, gas and mining for development

State Participation and State-Owned Enterprises

Roles, Benefits and Challenges

KEY MESSAGES

- Many countries create state-owned enterprises (SOEs) that focus on the extractive sector with hopes of building the country's capacity to participate in the lucrative field of resource extraction, to increase the government's revenue take, and to improve the government's ability to monitor what other companies are doing in the country.
- SOEs, often referred to as national oil companies (NOCs) in the oil and gas sector, play a variety of roles in different countries. These roles can include operating in the commercial sphere, regulatory responsibilities, creating policy, and financial expenditures.
- While some SOEs are extremely successful companies, others have trouble being competitive with international companies and demonstrating strong benefit to the populations they serve.
- While needs often vary from country to country, NRGI's research has shown a few trends that lead to successful NOCs, including clarifying roles between the SOE and other government entities, developing a clear revenue retention model, investing in staff and practicing transparency.

“The creation of nationally owned resource companies can be a key component in a country's strategy to harness the development potential of its subsoil assets. Despite these opportunities, national companies can pose a risk to a country if assigned inappropriate roles and governed poorly.”

– Natural Resource Charter,
Precept 6

THE RATIONALE FOR STATE PARTICIPATION

When natural resources are discovered in a country, governments often invite companies with experience in natural resource extraction to explore and extract the product. Many governments do this because they do not have the expertise, capital or equipment to bring resources out of the ground and to market. In this situation, the government makes money either by retaining ownership of the resource or charging taxes and royalties on the company's profits.

In some countries, the government decides that it can increase its potential earnings and control over the extraction process by creating a company focused on natural resource extraction. Government owned companies are usually called *state-owned enterprises* (SOEs). SOEs tend to be industry specific, with one SOE focused on mineral extraction and another focused on oil and gas, usually called a *nationally owned oil company* (NOC).

This reader is intended for use in conjunction with Precepts 1 and 6 of the Natural Resource Charter.

Extraction-focused SOEs, including NOCs, can play a variety of roles in helping to convert a country's natural resource wealth into better development. This reader outlines the benefits of SOEs, different roles played by SOEs, the challenges that face some SOEs, and some of the lessons learned on best practice of governance of SOEs.

BENEFITS OF STATE-OWNED ENTERPRISES IN EXTRACTIVES

Proponents of SOEs see the government's involvement in the industry as an opportunity build capacity, increase the government's take, and improve the government's monitoring of the industry.

- **Capacity building:** An SOE has the opportunity to become a domestic expert in commercial management of oil or mining. Over time, this can promote broader industrial development and reduce dependence on foreign partners. It can also lead to international expansion in a very lucrative business. Success requires a consistent commitment to training and the strategic use of private partners to supplement and build capacity.
- **Direct financial benefits:** Many countries view participating in the production of an extraction project as an opportunity to collect additional revenue. As the owner of an extraction company, the state not only receives revenue as a tax collector but also profits as a corporate operator.
- **Improved monitoring:** By having a seat at the table in an oil or mining venture, many governments expect to enhance their ability to monitor the activities of private partners.

THE ROLES OF STATE-OWNED ENTERPRISES IN EXTRACTION

Before the oil boom in the 1970s, private companies conducted most of the oil production. The oil boom spurred a wave of nationalization, leading to the massive expansion of the roles of NOCs. This domination, as depicted in figure 1, continues today. Ninety percent of the top 60 oil producers per capita have an SOE. SOEs are not as widespread in the mining industry, but they do play a key role in a number of countries.

Governments can create national companies that focus on extractives to play several different roles. The responsibilities can be divided into commercial roles, regulatory responsibilities, policymaking and national development.

Commercial roles

Some state-owned companies choose to act like a traditional extraction company and directly participate in the exploration, development and production of an oil field or mine. Often these companies are part of a *joint venture*, an agreement between different companies to work together on the development of a mine or oil field. This type of cooperation can take different forms. In some joint ventures, one company takes the lead in terms of providing personnel and equipment while the others provide financing and oversight. In such cases, the SOE will reap profits just like the other companies participating in the venture and bear the risk of a potentially unproductive field. The level of involvement of an SOE in a particular project varies based on country and

“Before the oil boom in the 1970s, private companies conducted most of the oil production. The oil boom spurred a wave of nationalization, leading to the massive expansion of the roles of NOCs.”

project. For example, Saudi Arabia’s Aramco is the *exclusive operator* in most fields in Saudi Arabia and does not typically own fields as a joint venture member. Meanwhile, Ghana’s GNPC is usually the *minority partner* in a joint venture with private companies. Some countries have provisions in their laws that automatically allow the SOE to participate in every exploitation contract.

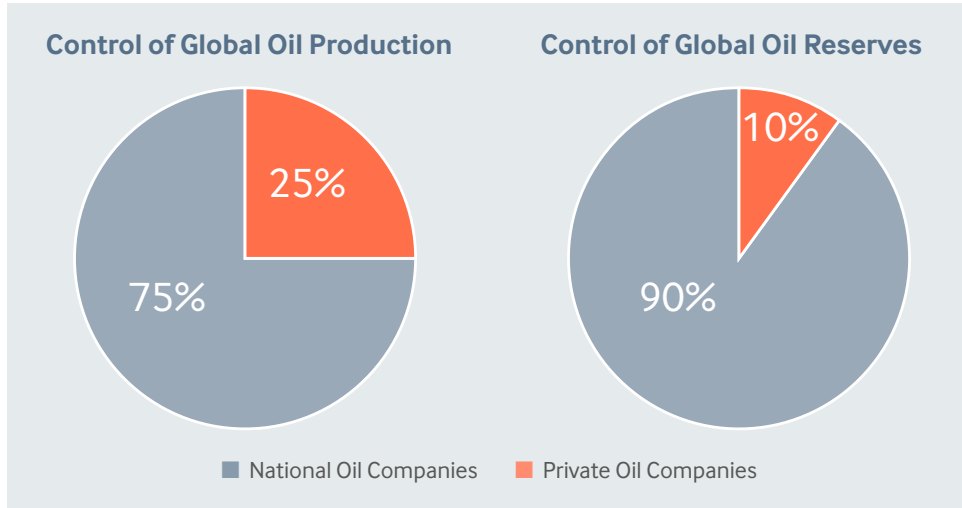


Figure 1. National oil companies control the majority of oil production

Source: NRGJ elaboration of World Bank data, available at <http://go.worldbank.org/UOQSWUQ6P0>

When a country has learned from experiences with extractive industries at home, some SOEs start to participate in exploration and extraction in other countries. Petronas, a Malaysian state-owned company, has extensive reach throughout Africa and Asia. Similarly, Chinese national oil companies such as PetroChina and Sinopec are well known for having a strong influence around the world, including in the development of African oil fields. Countries with successful NOCs tend to develop their operational capacities, such as Petrobras in Brazil growing expertise in deepwater oil extraction.

Some NOCs choose to invest in *downstream* development. This means they work to refine crude oil into a format that is available for an end user, such as gasoline for a car, or import these refined products. This type of business requires different skills, related to refining, transportation and marketing, than participating in extraction projects.

SOEs often have a role in selling the mineral or oil that is obtained by the state. The state could receive minerals or oil through a number of arrangements, including the NOC’s own extraction, its ownership shares in a joint venture, participation in a production-sharing agreement, and oil paid by companies to the government to cover their royalty or tax liabilities. Sales of oil by SOEs often represent a large portion of the government’s revenues: From 2011 to 2013, the total value of NOCs oil sales equaled 56 percent of combined government revenues for sub-Saharan Africa’s top 10 oil producers. Coordinating these types of sales, called *commodity trading*, requires advanced knowledge of the industry and market economics (see reader on commodity trading for more information).

Regulating roles

In addition to commercial or moneymaking roles, SOEs often have a larger responsibility in managing the development of the extractive sector in the country by promoting efficient exploration and production, channeling a fair share of revenues to the state, managing the stability of agreements, and monitoring operations and

“When a country has learned from experiences with extractive industries at home, some SOEs start to participate in exploration and extraction in other countries.”

revenue collection. The specific roles for SOEs vary from country to country but can include tax collection, assignment of operating rights, monitoring and management of cadasters, setting rules governing performance, ensuring compliance by companies with legislation, regulation and contracts, and approving key decisions by partner companies.

Revenue and roles for SOEs

This image shows how revenues can flow to and from state-owned enterprises with different roles. The blue arrows represent flows to the SOE, from collecting payments from companies on the bottom right, from participation in operations on the top right, and from the national treasury on the left. Revenues flow from the SOE to the national treasury on the left, to finance extraction projects on the top right, and toward quasi-fiscal expenditures at the bottom.

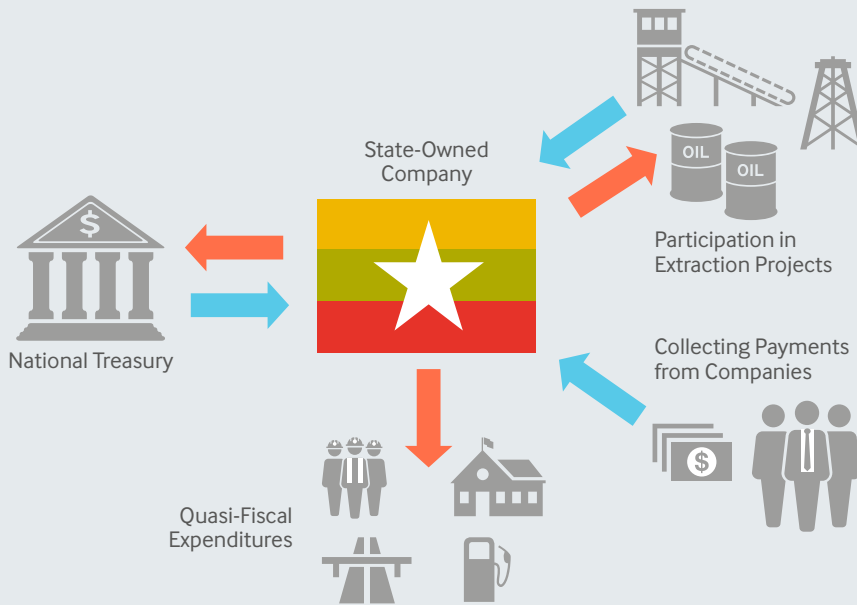


Figure 2. Types of revenue flows to and from SOEs

Source: NRG1

National development: quasi-fiscal roles

Some SOEs take on roles that would typically be carried out by ministries responsible for government expenditures, such as the ministry of finance or transport. Instead of transferring the revenues to the treasury, the SOE directly pays for projects such as servicing national debt, building or maintaining infrastructure, promoting health and education, providing consumer fuel subsidies, and purchasing arms. This practice can often be concerning because it avoids the usual review of the national budget process and can harm the commercial viability of the company. For example, in Venezuela the SOE PDVSA spent \$1.5 billion more on social programs than on oil projects in 2012. Domestic *fuel subsidies*, the mechanism for providing a discount to consumers who buy fuel in their own country, tend to be one of the largest quasi-fiscal expenditures by NOCs.

Policy

Many SOEs are involved in setting the overall strategic objectives for the sector. This can include drafting legislation and making big-picture decisions.

“Instead of transferring revenues to the treasury, SOEs can directly service national debt or build infrastructure (among others). This practice can often be concerning because it avoids the usual review of the national budget process.”

Tale of two approaches: NOCs and other ministries

In **Norway**, the policy, national development, commercial operations, and monitoring and regulation roles are split between four different government agencies. The NOC Statoil runs the commercial activities; the Storting, the national parliament, oversees policymaking; the Norwegian Petroleum Directorate conducts monitoring and evaluation; and the Ministry of Finance and line ministries oversee the pursuit of national economic development.

In contrast, Sonangol in **Angola** conducts all of these activities within one agency. It sets the national policy, oversees commercial activities, monitors international companies operating in the sector, and spends significant resources on development projects, including servicing the national debt and building housing.

CHALLENGES OF SOEs IN EXTRACTIVES

Well-managed state-owned companies can become large multinational enterprises with global renown. That said, many SOEs struggle to operate in a competitive manner that produces a sustainable benefit to the local population. The challenges SOEs face are myriad and particularly strenuous when institutions are weak and roles are not well defined. If not effectively staffed or supervised, state-owned companies can slow project development, decrease the revenue accruing to the state and exacerbate corruption. In many countries these enterprises have served as vehicles for public officials to steer valuable contracts toward their own interests, or to create bloated bureaucracies that do little to advance broader development. State equity investment also brings risks by exposing the country to a share of project costs and increasing dependence on non-renewable natural resources as a core economic driver. Commercially, NOCs record lower profits per employee than other international oil companies. (See figure 3.)

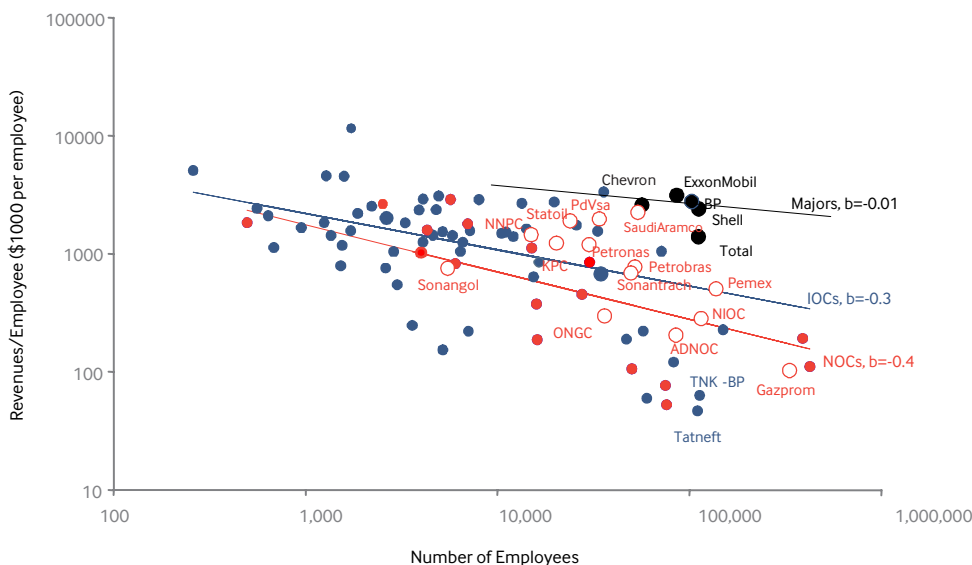


Figure 3. NOCs (red), Majors (black) and International Oil Companies (IOCs) (blue) revenue per employee vs. number of employees in 2004

Source: Nadeja Makarova Victor, *On Measuring the Performance of National Oil Companies (NOCs)*, Stanford University Program on Energy and Sustainable Development, Working Paper #64, 2007, http://iis-db.stanford.edu/pubs/21984/WP64_Nadja_Victor_NOC_Statistics_20070926.pdf

NRGI RECOMMENDATIONS

NRGI has researched the challenges facing SOEs in balancing the establishment of a commercially viable company and serving the public interest. NRGI recognizes that each SOE exists in a different context, with different demands and opportunities.

Cameroon’s SNH, which only participates as a minority shareholder and acts as a quasi-regulator, may not need the same corporate structures and resources as a corporation such as Norway’s Statoil, which competes with international companies to manage full projects. Focusing on oil companies, NRGi’s research has resulted in nine recommendations for NOCs.

	Recommendation	Core features
Defining and financing a commercial mandate	1. Carefully define commercial and non-commercial roles. Limit non-commercial activities where sophisticated or expensive commercial activities heighten the risk and cost of conflicts of interest.	<ul style="list-style-type: none"> Define a clear commercial strategy, and adhere to it. Clearly define what the NOC will not do, and enforce consistently. Limit regulatory role at stage where NOC aspires to true competitiveness.
	2. Develop a workable revenue retention model.	<ul style="list-style-type: none"> Navigate competing pressures: NOC needs access to sufficient revenue flows to cover costs, but where NOC has too much control over state finances, it risks becoming a parallel state. Other things equal, the higher the NOC’s investment needs, the higher the justification for it to have autonomy over revenue flows. Other things equal, the higher the share of overall public revenues passing through the NOC, the lower the justification for it to have autonomy over revenue flows.
	3. Procure external financing by listing some NOC shares on public stock exchanges or issuing external debt where appropriate.	<ul style="list-style-type: none"> Take advantage of capital-raising and corporate governance impacts of markets.
Limiting political interference in technical decisions	4. Define clear structures and roles for state shareholders.	<ul style="list-style-type: none"> Limit the number of government shareholders to promote coherent management.
	5. Empower professional, independent boards.	<ul style="list-style-type: none"> Make appointments according to well-defined, meritocratic processes. Emphasize technical expertise rather than political patronage.
	6. Invest in NOC staff integrity and capacity.	<ul style="list-style-type: none"> Adopt strong employee accountability provisions. Promote training and merit-based promotion. Restrict conflict of interest. Encourage learning orientation throughout company.
Ensuring transparency and oversight	7. Maximize public reporting of key data.	<ul style="list-style-type: none"> Disclose revenues, costs, revenue flow between NOC and the state, production, plans, results of oil trading and quasi-fiscal activities.
	8. Secure independent financial audits, and publish them	<ul style="list-style-type: none"> Commission audits by skilled independent professionals, and make results available to citizens.
	9. Choose an effective level of legislative oversight.	<ul style="list-style-type: none"> Ensure responsibility of NOC and its officials to answer to the legislature without unduly constraining

Figure 4. Nine recommendations for reforming national oil companies

Source: Heller et al, Reforming National Oil Companies: Nine Recommendations (NRGI 2014)

QUESTIONS TO ASK

- Are there SOEs in my country? If so, in what sectors?
- What roles does the SOE play in my country?
- How does the SOE in my country operate commercially? Is there mandatory participation for all projects? Does it operate at all outside my country?
- What are the national goals of our SOE and state participation?
- Is it possible to find information about the SOE's performance (see Resource Governance Index)?
- What return is the SOE providing to the national budget? Is the SOE involved in funding projects? If so, what types of projects?

ADDITIONAL RESOURCES

Natural Resource Charter, Precept 6

Heller et al, *Reforming National Oil Companies: Nine Recommendations* (NRGI, 2014), available at: http://www.resourcegovernance.org/sites/default/files/NRGI_9Recs_Web.pdf

Heller, Patrick and Dr. Valerie Marcel, *Institutional Design in Low-Capacity Oil Hotspots* (NRGI, 2012), available at: <http://www.revenuewatch.org/publications/institutional-design-low-capacity-oil-hotspots>

Marcel, Valerie, ed. *Guidelines for Good Governance in Emerging Oil and Gas Producers* (Chatham House, 2013), available at: <http://www.chathamhouse.org/publications/papers/view/194059>

The Natural Resource Governance Institute, an independent, non-profit organization, helps people to realize the benefits of their countries' oil, gas and mineral wealth through applied research, and innovative approaches to capacity development, technical advice and advocacy.
Learn more at www.resourcegovernance.org

Commodity Trading

Converting Natural Resources into Revenues

KEY MESSAGES

- Commodity sales transfer natural resources physical assets into revenues. The sales can generate a large portion of government revenues in a country that is paid in kind, participates in production sharing, or has a state-owned company that produces itself.
- Prices for sales of a commodity depend on many factors, including the grade or quality of the mineral. As a result, getting the best price for minerals or oil from a specific extraction point can be a complicated process that requires extensive expertise.
- Buyers of natural resources vary in part based on their capacity to convert, or refine, the raw resource into a format that can be used by a consumer. Commodity traders do not convert resources themselves but instead make a profit off buying from national governments and selling to those who can supply end users.

“A particularly critical area for transparency is the sale of petroleum by national companies on behalf of the state. Disclosure should cover the amount of oil the company receives, and the price, grade, volume and date at which it is sold.”

– Natural Resource Charter, Precept 6

WHAT IS COMMODITY TRADING?

A *commodity* is something that can be bought or sold to meet needs in the market. Raw materials, such as oil, gas and minerals, are considered commodities. In order to make a profit, the owner of the raw material—either the company or the government—must decide what to do with it. When a mineral comes out of the ground unaltered, referred to as *raw*, it is rarely in a form that is ready to be used. Usually the owner must decide whether to *refine* the raw material into a product that can be sold for a higher price or to sell the raw material to foreign or domestic buyers. When natural resources are discovered, often the government and company that decide to extract the resources do not have the desire, capacity or need to convert the commodity to its end-use product. The purchase and sale of commodities, including raw materials, is called *commodity trading*.

Understanding how commodities are bought and sold, who is involved, and the factors in pricing is key to ensuring that a country is able to capitalize on the benefits from its resource extraction. This reader describes who buys commodities, how the prices are determined, and the role of state-owned enterprises (SOEs). It focuses on the sale of oil but may be applicable to other commodities. Additional information on SOEs can be found in the reader on “State Participation and State-Owned Enterprises”.

This reader is intended for use in conjunction with Precepts 2, 6 and 11 of the Natural Resource Charter.

WHO BUYS COMMODITIES?

There are a range of potential buyers of extracted products, including the following:

- **Commodity trading companies.** Bringing in annual revenues of more than \$100 billion per year, large commodity trading companies seek to make profit from buying and selling resources. Traders can offer financing and flexibility that end users sometimes lack, and they are accustomed to operating in logistically or politically difficult environments. However, traders get a margin that theoretically could have been captured by the government or extraction company if it marketed the commodity itself. Many of the largest trading companies operate from Switzerland.
- **Refineries.** Producers' preferred customers are often refineries, which use a chemical process to transform the raw commodity into refined products. Refineries should pay the best price, because they make their money from processing oil and selling refined products rather than reselling oil to other entities.
- **Integrated companies.** These companies, like major Western oil corporations, will transform a raw commodity into something to be purchased by an end user. Sometimes they have a trading arm that trades the product to downstream subsidiaries. If a seller has the sophistication to market to these companies, it can often capitalize on a profit otherwise captured by traders. Angola's national oil company, Sonangol, for example, explicitly seeks to sell to integrated companies and end users.
- **Traders as marketers.** Some small exporters choose to hire a trading company to market their oil or minerals on their behalf. The traders have the experience to find customers for the specific crude or mineral produced. These traders are also experts in dealing with the challenging logistics and extraordinarily complex nature of the global commodities market. Traders' fees lower the government's profits from the sale of crude, but this can be beneficial when the government has low capacity to find good buyers. For example, the government of Ghana hired trading companies in 2011 and 2012 to sell all of its crude to other companies, such as Total, Sun, and China Oil.
- **End users.** Some companies and countries decide to invest in the supply chain so that they can convert the commodity that is taken out of the ground into something that can be sold to an end user, like gasoline purchased to fuel a vehicle. This often involves investing in refining, distribution and marketing with the hopes of capturing the increased value of the product at each step in the value chain.

“Traders’ fees lower the government’s profits from the sale of crude, but this can be beneficial when the government has low capacity to find good buyers.”

Swiss commodity trading companies

Swiss commodity trading companies represent an increasingly large percentage of those buying and selling commodities, including from government entities. From 2011 to 2013, they accounted for over \$55 billion in payments to sub-Saharan Africa's top 10 oil-exporting countries for commodities—nearly double the amount those countries received in development assistance. In Chad, for example, one Swiss trading company, Glencore, buys 100 percent of the oil sold by the government, making payments accounting for 16 percent of the government's revenues. These companies often have a high appetite for risk and will purchase oil from those that others might avoid, like the Libyan rebels in 2011. In many small or new producing countries, governments have negotiated long-term deals with Swiss companies to market their crude.

For a more complete assessment of the role of Swiss commodity trading companies in Africa, please see *Big Spenders: Swiss Trading Companies, African Oil, and the Risk of Opacity*.

DETERMINING THE PRICE

In addition to understanding who buys the product, it is important to understand the factors considered in determining a price.

The *grade*, or quality, of the commodity has a large impact on the price. In oil, for example, there are two main factors: *sweetness* and *heaviness*. The sweetness of oil refers to the amount of sulfur in it. Oil with less sulfur is sweeter, requires less processing to be used, and is therefore more valuable. The heaviness of oil refers to its density. Lighter crude can be refined into higher-value products, such as the gasoline used by car owners. Minerals have similar variations in quality. Coal, for example, ranges from *brown coal*, used for electric power plants, to *anthracite* coal, used for residential space heating.

The price of a particular commodity is often linked to, or *benchmarked* with, a known grade of the commodity elsewhere. *Dated Brent*, for example, is a market term for a cargo of North Sea Brent-blend crude oil. Dated Brent prices are used, directly and indirectly, as a benchmark for a large proportion of the crude that is traded internationally. Often a contract specifically links the price of sale of oil to the benchmark price, with terms like "Brent minus \$7.15" or "Ural plus \$3.42." This phrasing, called *formula pricing*, allows the price to fluctuate with the market without creating a separate fluctuation scheme for each extraction point. When media refers to the "price of oil," it is usually referring to the Brent price as an indication of a global trend.

Sellers often have a minimum price at which they are willing to sell their commodity. This is often tied to what they believe to be the value of the commodity and the cost of extraction. The cost of extraction can vary greatly from site to site, even for the same commodity. Shale oil in the United States costs nearly \$60 per barrel to extract, while oil in Iraq can cost as little as \$5 to extract. Those who are trying to sell oil that cost them more to extract may have more limited options to sell if the prices drop. Other site-specific factors can also influence the price, including distance to market, weather, political stability, sudden swings in distribution or quality, and skills of buyers and sellers.

Rise and fall of oil prices

Basic economic theory suggests that oil prices rise and fall because of changes in supply and demand. As oil has become an asset class, speculators buy and sell the oil not to use it but as a way of making money. Many economists now think that speculators influence the price and speed at which prices change. This can make it difficult for sellers to predict what a fair price will be for oil under production.

STATE-OWNED ENTERPRISES' ROLE IN THE COMMODITY MARKET

In many resource-rich countries, a SOE receives and sells a portion of the oil or mineral production. When they are focused on oil and natural gas extraction, SOEs are called NOCs (national oil companies). Sales by SOEs can generate a large portion of the government's revenues: From 2011 to 2013, the total value of NOC crude sales equaled 56 percent of combined government revenues for sub-Saharan Africa's top 10 oil producers.

THE PROCESS OF SELLING OIL

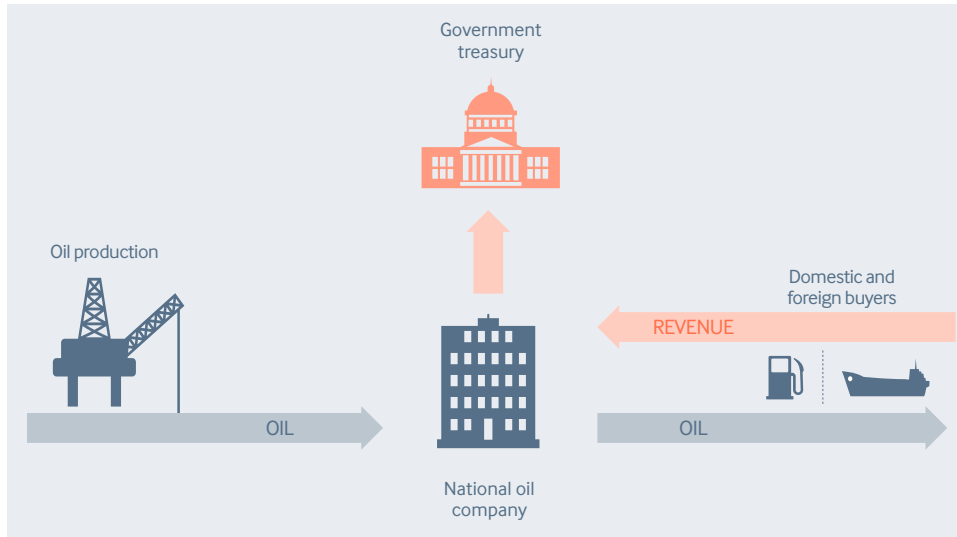


Figure 1. Flows of oil and money associated with national oil company oil sales

Source: Gilles, A. et al, *Big Spenders: Swiss Trading Companies, African Oil, and the Risk of Opacity* (NRGI, 2014)

While some of these steps are applicable to all types of commodities, the process below focuses the discussion on oil. There are four basic steps national oil companies follow to sell oil.

- 1 **Receipt of a production share.** NOCs are often in a position to sell a commodity from a variety of sources, including extraction by the NOC itself, ownership shares in a joint venture, participation in a production sharing agreement, and in-kind payments for royalties or tax liabilities (see reader on fiscal terms for further explanation). Before arranging for the sale, the NOC may be part of the extraction process or simply receive the commodity from the extraction company.
- 2 **Making a sale.** Making a sale involves deciding how to sell the commodity, identifying a buyer and agreeing on a price. Finding the right price, finding the right buyer, thinking about the sales' conditions, directing the paperwork, arranging the payment and organizing transportation are all highly specialized skills. Two of the most common ways to sell a commodity include *term sales* and *spot sales*. In term sales, the NOC negotiates a contract with a buyer for a longer period, typically a year, and the agreement stipulates how the price will be determined against a specified benchmark. In spot sales, the buyers and sellers of individual cargoes find each other and transact a deal *on the spot*. Many countries prefer *term contracts* for their predictability and lower staffing requirements for each shipment. Selecting a buyer should feature a similar kind of open and competitive process to awarding a contract,

so that no company receives an undue advantage and that the NOC is assured that it's receiving the best possible price.

- 3 **Receiving the revenue.** The NOC should receive revenue in exchange for the crude that it sells to a buyer. This cash could be paid to the NOC or to another branch of the government.
- 4 **Distributing the revenue.** Once the NOC receives revenue, it can reinvest it in the company, transfer it to the national treasury or spend it directly in development projects. When or how the revenues are transferred to the national treasury can differ based on the stream of oil.

For example, the proceeds from the sale of the NOC's own production or equity oil usually remain within the company (assuming it is a commercialized entity). The NOC pays taxes and royalties like any other company, and it pays dividends to its shareholders. Because the government owns some or all of the shares, it usually receives most or all of the dividend payments. The Mexican SOE Pemex, for example, retained all its export sale earnings but in 2010 paid \$52 billion in taxes to the state—\$4 billion more than its earnings that year.

When the government's share of production is sold, some or all of the proceeds are transferred from the NOC to the treasury. Some NOCs charge a fee for this service, leading them to retain a small portion of the revenue.

Given their often unparalleled access to funds, NOCs frequently spend for reasons other than their core business, usually acting on behalf of government. These are called *quasi-fiscal expenditures* (QFEs). NOCs pay for infrastructure, repay the government's debt, fund fuel subsidies, provide resources for social programs and acquire assets for other government entities. These expenditures require extensive oversight because they bypass the central budget and are often highly discretionary. See the reader on state participation and state-owned companies for more detail.

GOVERNANCE LESSONS

NRGI's research into the sale of commodities by NOCs has led to some early lessons in maximizing the benefit to the country. Overall, to be successful, NOCs should sell crude oil at the highest possible price, conduct the transaction at the lowest possible costs, and eliminate opportunities for corruption and abuses of authority. Some suggestions of good practice include:

- **Optimizing price within available means.** Successful NOCs have invested in the personnel to create sophisticated trading desks that can follow changes in the markets and identify buyers.
- **Use middlemen with care.** Most major NOCs focus their sales on end users or companies that will process their crude into petroleum products. While traders can offer flexibility and competitive pricing, their business model favors aggressive negotiation of sale terms, which can generate pressure on NOCs to grant favorable treatment. Without strong management and transparency, using middlemen creates risks for unfavorable deals that are not in the best interest of the country.

- **Promote autonomy and accountability.** SOEs should be kept separate from other government agencies, with clear rules and strong oversight. Trading in particular should be kept free from political influence. Strong corporate governance practices, including thorough reporting, can help protect SOEs from potential corrupting government influences. In addition, rigorous audits of physical and financial flows should be used to encourage accountability.
- **Transparency and oversight by home countries.** As with other types of extractive companies, commodity traders and the other companies that buy from governments and NOCs should be required to fully report on these transactions. Switzerland and other countries where traders are based should require this kind of reporting through mandatory reporting legislation.

QUESTIONS TO ASK

- What commodities are sold in my country? What is their grade?
- Who buys most of the commodities from my country? What type of contract is used? How is the price determined? Is information about this publicly available?
- Does an SOE or government agency sell commodities from my country? If so, what is the capacity of their trading desk? Do they make information about the process of trades publicly available?
- If there is an SOE, how are the revenues it collects distributed? What is the relationship between the SOE and other branches of government?

ADDITIONAL RESOURCES

Natural Resource Charter, Precept 6, available at: http://www.resourcegovernance.org/sites/default/files/NRCJ1193_natural_resource_charter_19.6.14.pdf.

Fattouh, Bassam, *The Anatomy of the Crude Oil Pricing System* (The Oxford Institute for Energy Studies, 2012), available at: <http://www.oxfordenergy.org/wpcms/wp-content/uploads/2011/03/WPM40-AnAnatomyoftheCrudeOilPricingSystem-BassamFattouh-2011.pdf>.

Gillies, A., *The Case for Transparency in National Oil Company Crude Sales* (NRGI, 2012), available at: <http://www.revenuewatch.org/sites/default/files/OilSales-Transparency.pdf>.

Gillies, A. and J. van Schaik, *The Governance of Oil Sales: Early Lessons on Good Practice* (NRGI, 2012), available at: <http://www.revenuewatch.org/sites/default/files/OilSales-Governance.pdf>.

Gilles, A. et al, *Big Spenders: Swiss Trading Companies, African Oil, and the Risk of Opacity* (NRGI, 2014), available at: <http://www.resourcegovernance.org/publications/big-spenders-swiss-trading-companies-african-oil-and-risks-opacity>.

Van Schaik, J., *When the Price Is Right* (NRGI, 2012), available at: <http://www.revenuewatch.org/sites/default/files/OilSales-PriceisRight.pdf>.

Van Schaik, J., *How Governments Sell Their Oil* (NRGI, 2012), available at: <http://www.revenuewatch.org/sites/default/files/OilSales-HowGovtsSellOil.pdf>.

The Natural Resource Governance Institute, an independent, non-profit organization, helps people to realize the benefits of their countries' oil, gas and mineral wealth through applied research, and innovative approaches to capacity development, technical advice and advocacy.
Learn more at www.resourcegovernance.org



Oil, gas and mining for development

Revenue Management and Distribution

Addressing the Special Challenges of Resource Revenues To Generate Lasting Benefits

KEY MESSAGES

- Oil, gas and mineral revenues are special because they are finite, volatile and, if large enough, can negatively impact other industries. They also generate large economic rents and are location-specific, which can lead to conflict over their control. As a result, they may need to be managed and distributed differently from other types of government revenue.
- There are various techniques governments can employ to respond to the special challenges of natural resource revenues, including distributing revenues to natural resource funds, state-owned enterprises, subnational jurisdictions, the national budget, or directly to citizens in the form of cash. Each of these institutions requires a unique management strategy.
- Large and volatile capital inflows also have special implications for monetary policy. It may need to be adjusted to control inflation, exchange rate appreciation or macroeconomic volatility.

“Sustainable economic development cannot come from merely extracting a resource. Authorities must invest revenues so that current and future generations enjoy the bounty.”

– Natural Resource Charter, Introduction

NATURAL RESOURCE REVENUES ARE SPECIAL

Many countries do not see their expected returns of social and economic development when they discover natural resources. This challenge is in part linked to how the countries manage the *natural resource revenues*, or the money received by the government because of the extraction or sale of natural resources. Before understanding the options for managing natural resource revenues, it is useful to understand what makes them unique:

- **They are finite.** Each extraction project cycle has a limited time span, usually between 20-50 years. While new technology or exploration generates new discoveries, ultimately extractive resources are finite. Many countries have seen large economic booms during their peak production phase only to fall into poverty as soon as the resources are fully exploited. The graph above shows the revenue cycle of a typical oil and gas project.

This reader is intended for use in conjunction with Precepts 7, 8, 9 and 10 of the Natural Resource Charter.

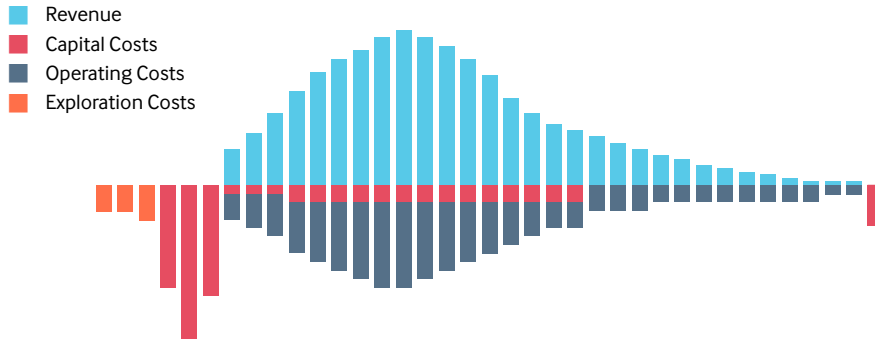


Figure 1. Illustrative project timeline for a typical oil and gas project.

Source: Bauer, Andrew, *Subnational Oil, Gas and Mineral Revenue Management (NRGI, 2013)*, 9

- **They are volatile.** Prices of natural resources, called *commodity prices*, fluctuate according to market forces. When government revenues are tied to natural resources, their revenues will fluctuate accordingly. Volatility is amplified by extraction production cycles and unexpected stoppages. This makes development planning difficult. It also leads to incentives to overspend on grandiose legacy projects when prices rise and go into debt when revenues decline in order to maintain the same standard of living as before the slump. The consequence is poor investment decisions and higher probability of debt crises.

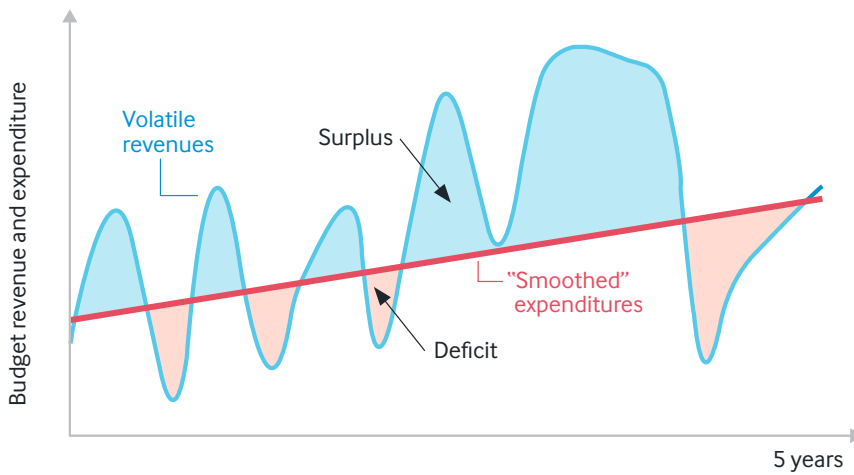


Figure 2. Volatile revenues

Source: Bauer, 12

- **They can damage other industries.** When natural resources are discovered, they can represent a large percentage of the country's GDP and government revenues. If the economy does not have the *absorptive capacity* to make efficient use of these revenues, the result can be inflation or exchange rate appreciation. This increases the cost of domestically produced goods in foreign markets, especially manufactured goods, harming exporters. Also, the large revenues in the private sector often attract skilled workers to extractive industries. When the number of skilled workers in a country is small, this can make it more difficult for other sectors to find expertise. Together these trends can make it more difficult for other industries to successfully operate and can make a country more dependant on natural resources. Together, these effects are often referred to as *Dutch disease*.

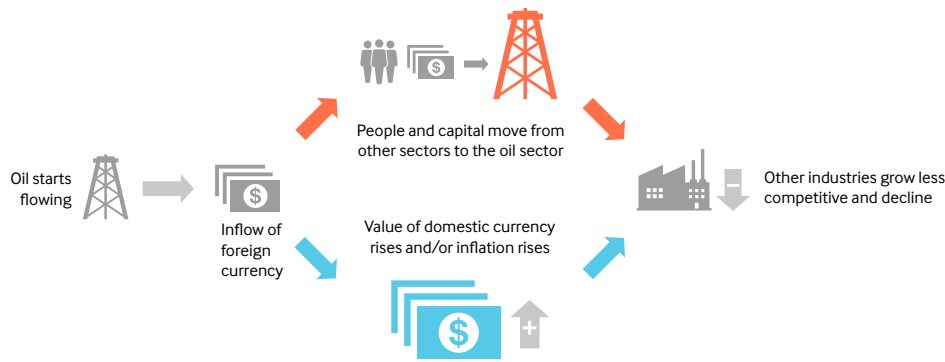


Figure 3. Dutch disease and drain effect

Source: NRGi

- **They can be large and geographically concentrated.** Natural resource revenues can be enormous relative to the size of an economy, yet, as a capital-intensive rather than labor-intensive industry, they tend to employ only a very small portion of the population. This is often misaligned with the expectations of the communities that surround the extraction point. Furthermore, the profits can be captured by a select few or be exported to foreign investors. This can cause frustration and unmet expectations among locals, leading to conflict, especially in the region where the mines or oil fields are located. The large amount of profits from a single source is vulnerable to elite capture or government mismanagement unless oversight mechanisms are in place.

REVENUE MANAGEMENT GOALS

Despite the challenges listed above, governments can make decisions to use their natural resource revenues in a manner that has long-term positive social and economic impact on the country. The discussion about how to create that outcome from resource revenues mixes questions about policy, revenue distribution and management tools, and the political and economic impacts of different revenue management choices. Here are some of the major policy considerations that are often raised in deciding how to best manage and allocate natural resource revenues:

- **Benefits across generations.** This question considers how much revenue should benefit the current generation versus how much should be invested for future generations. Because natural resources are finite, this is a more stark policy decision than for other industries. In countries with low levels of education and inadequate infrastructure and a government capable of transforming resource revenues into development, immediate spending to raise economic growth and improve livelihoods may be wise. Where these conditions do not exist, a more spread-out spending plan may be appropriate. Spreading out spending over time may imply *parking* resource revenues in foreign assets for a short period of time.
- **Benefit across the nation.** In addition to questions about generations, the government must decide who within the current population should benefit from the resources. Should the benefits be distributed in such a way that all people benefit equally, or should they be distributed in a manner such that some, like the poor or high potential industries, stand to benefit more? Also, should producing regions benefit to a greater degree than non-producing regions? Some of the revenue management and distribution tools discussed below, such as direct distribution, tend to benefit the poor more relative to the rich. However, the details of how

these projects are implemented can have undesired impacts. For example, if a direct distribution plan is not conditional on, for instance, sending children to school, the policy can spur wasteful consumption and starve the government of needed financing for infrastructure and social services.

- **Domestic vs. foreign investments.** The end goal of extracting oil, gas or minerals from the ground is to increase government revenues and improve livelihoods through things such as better access to healthcare, education and electricity. The best way to do this is not necessarily by directly investing in domestic public services. There are three reasons governments may wish to invest in foreign assets, for instance, in overseas stocks and bonds, for a time. First, if the economy is highly developed, there may only be a marginal social return of investing inside the country, which could be less than the financial return on foreign investments. Second, some governments do not have the *absorptive capacity* to invest all resource revenues efficiently, because they lack managerial capacity or because of lack of workforce and tools to effectively deliver on government projects. Third, governments may wish to create an endowment for future generations and live off the interest. In these scenarios, governments may wish to *park* some of their revenues in foreign investments.
- **Managing volatility.** Volatile resource revenues do not necessarily mean the government has volatile expenditures. A government can choose to use tools, such as the *fiscal rules* discussed below, to stabilize the amount of revenues that are spent in any given year. Alternatively or additionally, governments can adjust the amount the spent in *capital expenditures* versus *recurrent expenditures*. Capital expenditures are onetime allocations, such as building a new bridge. Recurrent expenditures are spending decisions that are likely to return each year, such as teacher salaries. While volatility in recurrent expenditures is extremely problematic, investment expenditures are inherently uneven.
- **Growing the domestic economy.** Improving the domestic economy, with the potential to increase jobs and tax collection, should be the goal of investing natural resource revenues. One of the debates about how to invest is whether to invest in the enabling environment, for example, port infrastructure, or a specific sector, such as tourism. Another major question is whether to invest in *local content*, that is, job creation related to extractive industries, or economic diversification. Local content takes advantage of the presence of the extractive industries, while economic diversification reduces the reliance on the sector.
- **Managing expectations.** As noted above, large resource revenues often come with large expectations for quick returns, creating risk for conflict or turbulent governance. Some governments respond to these expectations by investing in projects that provide a quick tangible return to citizens, such as large infrastructure projects. In some countries, this practice has led to wasteful spending on popular but often unproductive projects, such as multiple football stadiums. Improvements to public spending and management processes are another way to respond to expectation challenges. An open and transparent revenue management and distribution process can also aid the government in managing expectations.

“A government can choose to use tools, such as the fiscal rules, to stabilize the amount of revenues that are spent in any given year.”

The study of impacts and best practices in this field is ongoing, and therefore each policy decision is taken with a potential risk of impact.

TOOLS AND INSTITUTIONS FOR REVENUE MANAGEMENT AND DISTRIBUTION

Revenue distribution refers to the manner in which a government *allocates*, or distributes, natural resource revenues to different levels of government, institutions, or directly to citizens. Some of the decisions of where to allocate revenues are fundamentally political, but economic efficiency criteria can also help determine how much should be allocated to which institution. *Economic efficiency criteria* consider questions of the absorptive capacity of different levels of government, whether individual citizens have access to the ability to save transfers, and how costs differ over different locations or sectors. Combining the economic theory with the political analysis can be challenging, particularly when trying to respond to the special qualities of natural resource revenues listed above. For instance, allocating an appropriate percentage of revenues, determined by an economic formula, to a long-term savings fund can help mitigate Dutch disease and improve national spending efficiency, though it can also starve the government of much-needed development financing. Allocating some revenues to subnational governments may reduce interregional income inequality or improve local service delivery, though the opposite can also be true. Allocating resource revenues directly to citizens may reduce poverty and improve natural resource revenue accountability, though it may also starve the government of revenues for public investments. Governments, with input from citizens, must decide how to manage risks and opportunities between these potential outcomes.

Allocation of revenues is only part of the picture. Each institution that receives resource revenues should have established procedures or principles to plan, organize, staff and control their operations. These activities are referred to as *revenue management*, as opposed to *revenue distribution*, which simply refers to the allocation of revenues. Below is a list of key institutions that manage resource revenues and how they function.

- **Budget allocations.** Resource-rich countries have the opportunity to invest their revenues in development through public spending. The principal institution used is the *annual budget process*, though many countries also have multi-year expenditure frameworks or multi-year *development plans*. Which sectors a country chooses as investment priorities can have a large influence on the sustainability of the investment. Malaysia, for example, found success in prioritizing education and infrastructure. In resource-rich countries, one challenge of large domestic spending and low *absorptive capacity*, or the rate at which a government can efficiently spend money, is that spending can perpetuate Dutch disease.

The *budget process*, that is, the process by which governments decide when, where and how much to spend which resources, is equally important. Development plans and budgets tend to be most successful when they are both *participatory* and *aligned*. *Participatory* development plans are created with input from multiple actors, including citizens. A plan that is *aligned* incorporates input from the private sector into the government plan. For example, if a mining company is going to be building a railway to export its minerals, then the plan should at the least include that railway and potentially set out to partner with the company so that the most overall useful railway is constructed.

The plans and budgets must then be monitored throughout implementation and properly audited. Because resource-rich governments have a tendency to spend

What not to do: Nauru

Nauru, an island state, used to be mineral-rich but did not plan well. In 1973, due to its phosphate mining boom, it had gone from one of the world's poorest countries to one of the richest, with GDP per capita exceeding \$25,000 (2005 dollars). Overconsumption and underinvestment, however, meant that by 2007, it had once again become one of the world's poorest countries, with GDP per capita at less than \$1,900.

heavily on capital projects, it is especially important that projects be subject to a full cost-benefit analysis, that procurement is transparent and competitive, and that the government monitors delivery.

- **Natural resource funds and other special funds** (see reader on natural resource funds). Governments can establish special *extrabudgetary funds*—outside the regular budget process—to manage natural resource revenues. When these funds have macroeconomic objectives and invest at least partly in foreign assets, they are referred to as *sovereign wealth funds* or *natural resource funds*. Ideally, the government dictates how much to deposit and withdraw from these funds by *fiscal rules*, multi-year constraints on government finances. Often, however, governments, especially authoritarian ones, manage natural resource funds on an *ad hoc* basis, without clear rules or objectives. Countries have shown the most success when funds are established with clear objectives, strong fiscal and investment rules, a division of responsibilities between actors, and sufficient disclosure for proper oversight. Half of all natural resource funds do not publish quarterly financial statements and are therefore hard to assess.

Governments often establish other types of extrabudgetary funds to earmark resource revenues for specific expenditure items. When operating outside of the normal budget process, they are often designed to skirt budget rules or avoid public scrutiny.

- **State-owned enterprises (SOEs)**. State-owned enterprises are companies that are more than 50 percent owned and operated by the government. Resource-rich countries often establish sector-specific SOEs, such as a national oil company (NOC). SOEs can play an important role in revenue management, as natural resource revenues often pass through them on their way to the budget, or there are large budget allocations of oil or mineral revenue to the SOE. Countries often find SOEs attractive, as NOCs and national mining companies (NMCs) can generate revenues for the state and serve other functions, such as training domestic workers and improving sector control. There is a risk, however, that NOCs and NMCs can act as a drain on government finances or become a financial risk. For instance, NOCs and NMCs represent further investment in an industry that already has some tendency to crowd out other industries, and thus they can divert scarce government revenues away from public investments in other sectors. Also, if national companies go bankrupt, taxpayers are on the hook to pay their debt.

In addition, SOEs often are responsible for non-fiscal expenditures that can be an inefficient use of public resources, such as fuel subsidies or corporate social responsibility (CSR) projects. When these *quasi-fiscal* spending tools are under the control of the SOE, it can be difficult to align with the national budget. If a government clearly establishes the fiscal relationship between the SOE and the budget, it can work to avoid such problems. For example, if all the revenue from an SOE flows into the budget and then parliamentarians allocate an SOE's annual budget, they can oversee and monitor the mandate and quasi-fiscal activities.

- **Subnational distribution**. Some governments choose to share the national revenues with subnational government. More than 30 countries, such as Indonesia, Peru, and Nigeria, allocate a percentage of natural resource revenues to producing subnational distributions as a means to allow those most directly impacted by resource extraction to have enhanced revenue benefits. The amount distributed is

“Countries have shown the most success when funds are established with clear objectives, strong fiscal and investment rules, a division of responsibilities between actors, and sufficient disclosure for proper oversight.”

often a function of the degree of fiscal federalism in the country and of the political power of subnational versus national governments.

- **Direct distribution.** A small number of governments (e.g., Alaska, Mongolia) have sought to share revenue benefits directly with citizens via cash transfers. Proponents argue that this form of distribution increases citizen engagement and can disproportionately benefit the poor. However, this form of revenue distribution can have unintended consequences, such as increasing household consumption at the expense of public investment. A more targeted approach to cash transfers—for example, by allocating resource revenues to the poor—may offer a more efficient alternative.

MONETARY POLICY

Another important aspect of revenue management is monetary policy, the process by which the government of a country controls the supply of money. Tools at its disposal include certain interest rates, government bond purchases/sales, and purchase/sale of other assets. Central banks often use these tools to target economic growth, unemployment, inflation or the exchange rate with other currencies.

Resource-dependent countries are particularly susceptible to two monetary problems: a large inflow of foreign capital causing an overvaluation of the real exchange rate (inflation and nominal exchange rate), and macroeconomic volatility. Macroeconomic volatility refers to volatility of prices, exchange rates and GDP. The large capital inflow can lead to Dutch disease. This problem can be overcome through monetary sterilization, that is, the central bank buying foreign currency and saving it as official reserves or selling domestic bonds. Macroeconomic volatility can be controlled by fixing or managing the exchange rate through the same mechanisms. Nearly every oil-rich country's central bank manages its exchange rate..

“Macroeconomic volatility can be controlled by fixing or managing the exchange rate.”

OVERSIGHT

Revenue management schemes are most successful when they are designed to allow for strong oversight. Oversight can protect these revenues from the challenges of popular political demands and corruption. Good oversight systems should include the following:

- Transparency of revenues entering the system and where they are allocated
- Transparency of the rules that regulate decisions on when, where and how revenues are allocated
- Regular reporting and audits of all government and investments by an external accounting firm
- Separation between decision makers and oversight boards
- Strong legal sanctions brought against anyone who takes government funds or misuses the power of their office

“Revenue management schemes are most successful when they are designed to allow for strong oversight.”

QUESTIONS TO ASK

- What are my country's goals for how to use natural resource revenues?
- Is the distribution of resource revenues in my country efficient? Does it encourage efficient spending across regions and institutions?
- Are revenues in my country focused on spending for current or future generations?
- Does my country have a coherent medium- or long-term national development plan? If not, why? If so, does it address my country's challenges, and is it used in annual budget planning?
- Does my country have a natural resource fund? If so, what is its purpose?
- Is the government actively pursuing a policy of economic diversification?
- How is my country working to control macroeconomic volatility or Dutch disease?

ADDITIONAL RESOURCES

Allen, Richard, and Dimitar Radev, *Extrabudgetary Funds* (2010), available at: <https://www.imf.org/external/pubs/ft/tnm/2010/tnm1009.pdf>

Bauer, Andrew, *Managing the Public Trust: How to Make Natural Resource Funds Work for Citizens* (NRGI and Columbia Center of Sustainable Investment, 2014), available at: http://www.resourcegovernance.org/sites/default/files/NRF_RWI_Complete_Report_EN.pdf

Bauer, Andrew, *Subnational Oil, Gas and Mineral Revenue Management* (RWI, 2013), available at: http://www.resourcegovernance.org/publications/fact_sheets/subnational-oil-gas-and-mineral-revenue-management

Collier, Paul, and Anthony Venebles, *Plundered Nations? Successes and Failures in Natural Resource Extraction* (Palgrave Macmillan, 2011).

Heller, Patrick, Paasha Mahdavi, and Johannes Schreuder, *Reforming National Oil Companies: Nine Recommendations* (2014), available at: <http://www.resourcegovernance.org/publications/reforming-national-oil-companies-nine-recommendations>

Morgandi, Matteo, *Extractive Industries Revenues Distribution at the Sub-National Level* (RWI, 2008), available at: <http://www.revenuewatch.org/publications/extractive-industries-revenues-distribution-subnational-level>.

The Natural Resource Governance Institute, an independent, non-profit organization, helps people to realize the benefits of their countries' oil, gas and mineral wealth through applied research, and innovative approaches to capacity development, technical advice and advocacy.
Learn more at www.resourcegovernance.org

Fiscal Rules and Natural Resource Funds

Methods to Save and Stabilize Revenues

KEY MESSAGES

- *Natural resource funds* (a subset of *sovereign wealth funds*) can help governments respond to some of the macro-economic challenges of natural resource wealth by setting aside or investing some or all of natural resource revenues in foreign or other assets.
- To be effective, funds must have clear objectives, and their deposit, withdrawal and investment rules must be aligned with those objectives. Potential objectives can include smoothing expenditures, savings, mitigating Dutch disease, earmarking for public investment, ring fencing and political leverage.
- *Stabilization funds* can help smooth budget expenditures and *savings funds* can set aside revenues until they can be spent more efficiently or create an endowment for future generations.
- *Fiscal rules* for natural resource funds dictate how much a government deposits into and withdraws from the fund each year. Which fiscal rules a government applies should take into account the overall fund objective and the amount of savings or expenditures necessary to meet that objective in the country context.
- Natural resource funds are most effective when they are subject to independent external oversight and publish regular reports on investments, activities and managers.

“An explicit financial rule dictating the amounts spent and saved each year by government can guide the long-term decision to save.”

– Natural Resource Charter, Precept 7

“One strategy to address revenue volatility is to form a fund with surplus revenues to accumulate foreign assets in boom times, and liquidate those assets when revenues fall.”

– Natural Resource Charter, Precept 8

WHAT ARE NATURAL RESOURCE FUNDS?

Natural resource funds (NRFs) are a revenue management tool used by many governments as a way of investing or putting aside revenues derived from oil, gas or mineral extraction. As of July 2014, there were approximately 58 funds in more than 40 countries holding about \$4 trillion in assets. Funds are created for many different reasons and used in many different ways. Some countries created funds to cover budget deficits when revenues decline, save for future generations, earmark for national development projects, or mitigate Dutch disease. In other countries, however, funds have been created or used to avoid the public scrutiny of the regular budget process.

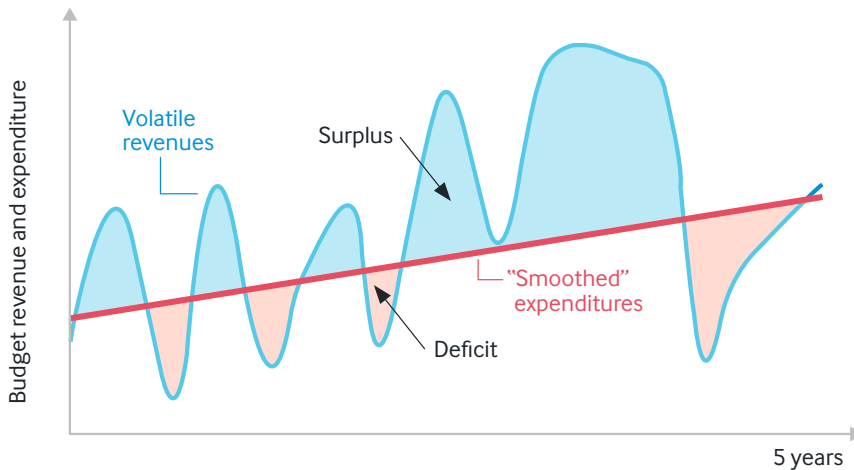
Effective management of natural resource funds requires clear objectives, fiscal rules, investment rules, division of responsibility between actors, public disclosures, and oversight opportunities.

This reader is intended for use in conjunction with Precepts 7 and 8 of the Natural Resource Charter.

FUND OBJECTIVES

The *objective* of a fund is a clear statement about why the government is putting some money into a different account instead of directly into the budget. Governments create NRFs for a variety of reasons, including:

- **Smoothing expenditures.** The volatility of resource revenues can lead some governments to create a *stabilization fund* that will receive deposits when prices are high and supplement the budget when prices are low. See figure 1.



Sovereign wealth funds

Sovereign wealth funds are state-owned entities with macroeconomic objectives that invest at least partly in foreign financial assets. A natural resource fund is a type of sovereign wealth fund.

Figure 1. Volatile revenues

Source: Bauer, Andrew, Subnational Oil, Gas and Mineral Revenue Management (NRGI, 2013), 12

- **Saving.** Where the exhaustibility of resource revenues is a primary concern, governments may direct a portion of these revenues to a *savings fund*. The investment returns on these funds can then be used to finance government expenditures once oil or minerals are depleted.
- **Mitigating Dutch disease.** Saving a portion of resource revenues in foreign assets can mitigate inflation and exchange rate appreciation that often comes from a large influx of resource revenues. This tactic is called *fiscal sterilization*.
- **Earmarking for public investment.** Some countries find that using a fund to earmark resources for particular development goals can guarantee financing for chronically underfunded expenditure items, such as environmental protection, water systems or education programs.
- **Ring fencing.** By subjecting natural resource revenues to a high degree of transparency and public scrutiny, natural resource funds can be used to protect resource revenues from corruption or mismanagement.
- **Political leverage and autonomy.** Having large savings can protect a government from needing to borrow from private banks or international financial institutions during economic downturns, both of which can impose burdens on the government. Subnational governments with NRFs find that they may become less dependent on the national government, both financially and politically. Unfortunately, natural resource funds have also been used by some governments to avoid public scrutiny and pursue their own objectives, either by releasing scant information on their activities or using them as a parallel and less accountable budget.

“Where the exhaustibility of resource revenues is a primary concern, governments may direct a portion of these revenues to a savings fund.”

NRGI strongly urges governments establishing funds to clarify their objectives so that the fiscal and investment rules they select are appropriate. Some countries create multiple funds with different fiscal rules to meet different needs. Other countries, such as Timor-Leste, create one fund with multiple objectives.

FISCAL RULES

Fiscal rules for natural resource funds dictate how much a government deposits into and withdraws from the fund each year. Which fiscal rules a government applies should take into account the overall fund objective and the amount of savings or expenditures necessary to meet that objective in the country context. For example, if a country needs financing for development projects and has the *absorptive capacity* to implement projects, then the government may wish to spend more and save less. However, the government may also wish to save a significant fraction of resource revenues to create a buffer in case of economic downturn. The rules also need to take into account which revenue streams (bonuses, royalties, fines, sale of profit oil, etc.) are deposited into the fund. Withdrawal rules specify how often withdrawals can be made, where they must go and whether they need to be approved by parliament.

“Fiscal rules for natural resource funds dictate how much a government deposits into and withdraws from the fund each year.”

Case study: Ghana

When news came of large gas discoveries in Ghana, the government decided to establish multiple resource funds to meet various objectives. Though the rules are somewhat complex, they show how a government can meet different objectives with different operational rules. All petroleum revenues are deposited into the Petroleum Holding Fund. The Petroleum Holding Fund then disperses money to the Ghana National Petroleum Company (up to 55 percent of carried interest), the Annual Budget Funding (not more than 70 percent of a seven-year average of potential revenues, which must be approved by parliament), the Ghana Heritage Fund (minimum 30 percent of the remaining amount), and the Ghana Stabilization Fund (remainder). The clear goals of the Heritage Fund and the Stabilization Fund also dictate different investment rules to help them reach these objectives.

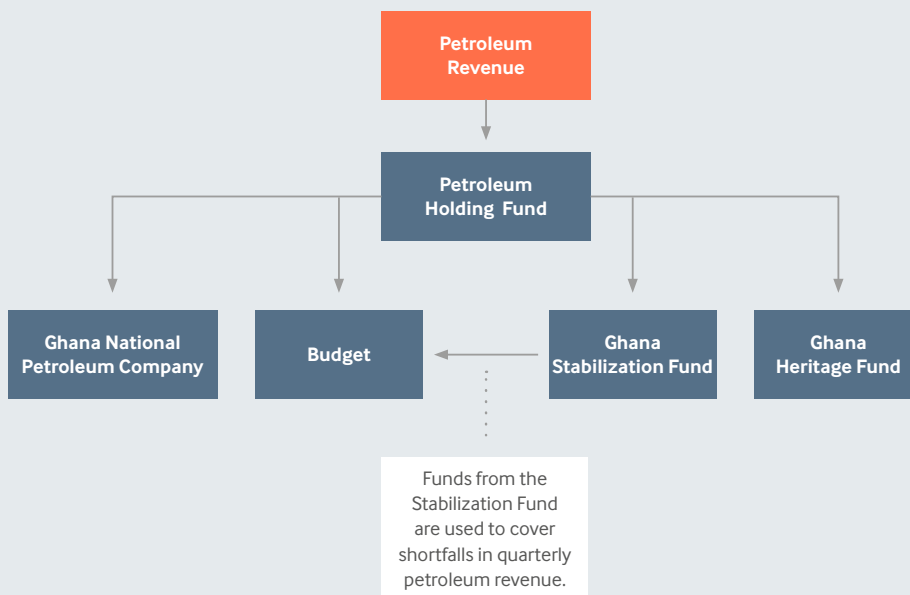


Figure 2. Flow of petroleum funds in Ghana

Source: Ghana profile in Bauer, Andrew (ed.), *Managing the public trust: How to make natural resource funds work for citizens* (NRGI and Vale Columbia Center, 2013).

INVESTMENT RULES

Once a country decides to deposit revenues, it must make decisions about how, where and when to invest them. As with any investment, the decisions about where to invest the funds depend on the appetite for risk and desired return. A fund’s objectives should inform its financial return target and act as an implicit statement of the fund’s risk appetite. For example, a stabilization fund, which may be needed to fill budget gaps in the short term, must hold liquid assets that are more readily available. Assets could be allocated in a range of choices, such as:

- **Cash:** Highly liquid and low-risk, low-return, such as short-term government bonds and bank deposits
- **Fixed income/bonds:** Debt instruments with more risks and return, such as corporate bonds
- **Equities:** Stocks in companies with varying degrees of risk and return
- **Alternative assets:** More volatile and complex assets with higher long-run expected returns, such as real estate and infrastructure

Usually, fund managers select a breakdown of these different types of assets based on the fund’s overall risk. Sometimes the actual investment decisions are made by government or central bank officials, called *internal portfolio managers*. In other cases, the government or central bank hires a firm to make the actual investment decisions for them within a clear set of instructions.

“As with any investment, the decisions about where to invest the funds depend on the appetite for risk and desired return.”

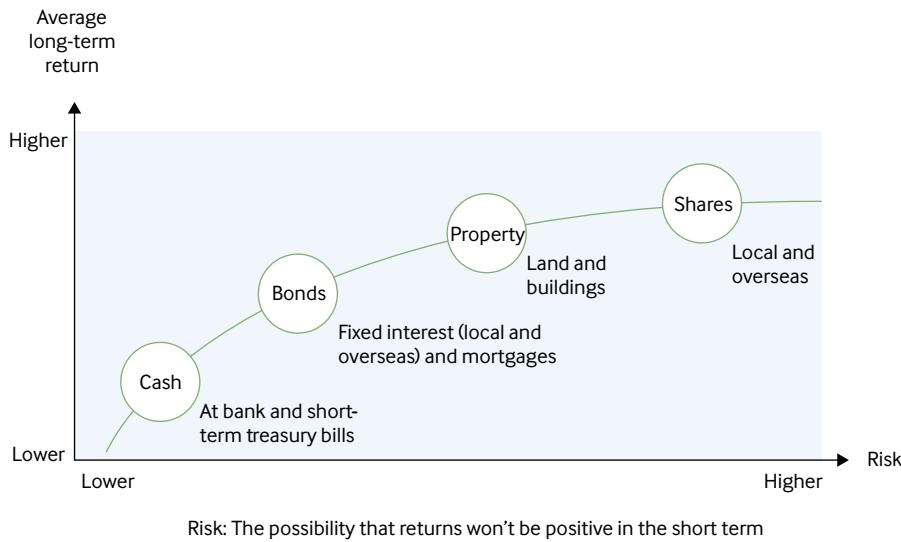


Figure 3. The risk-return profile of major asset classes

Source: Bauer, Andrew and Rietveld Malan, Rules-based Investment for Natural Resource Funds (NRGI and Vale Columbia Center, 2013), 5

FUND STRUCTURE

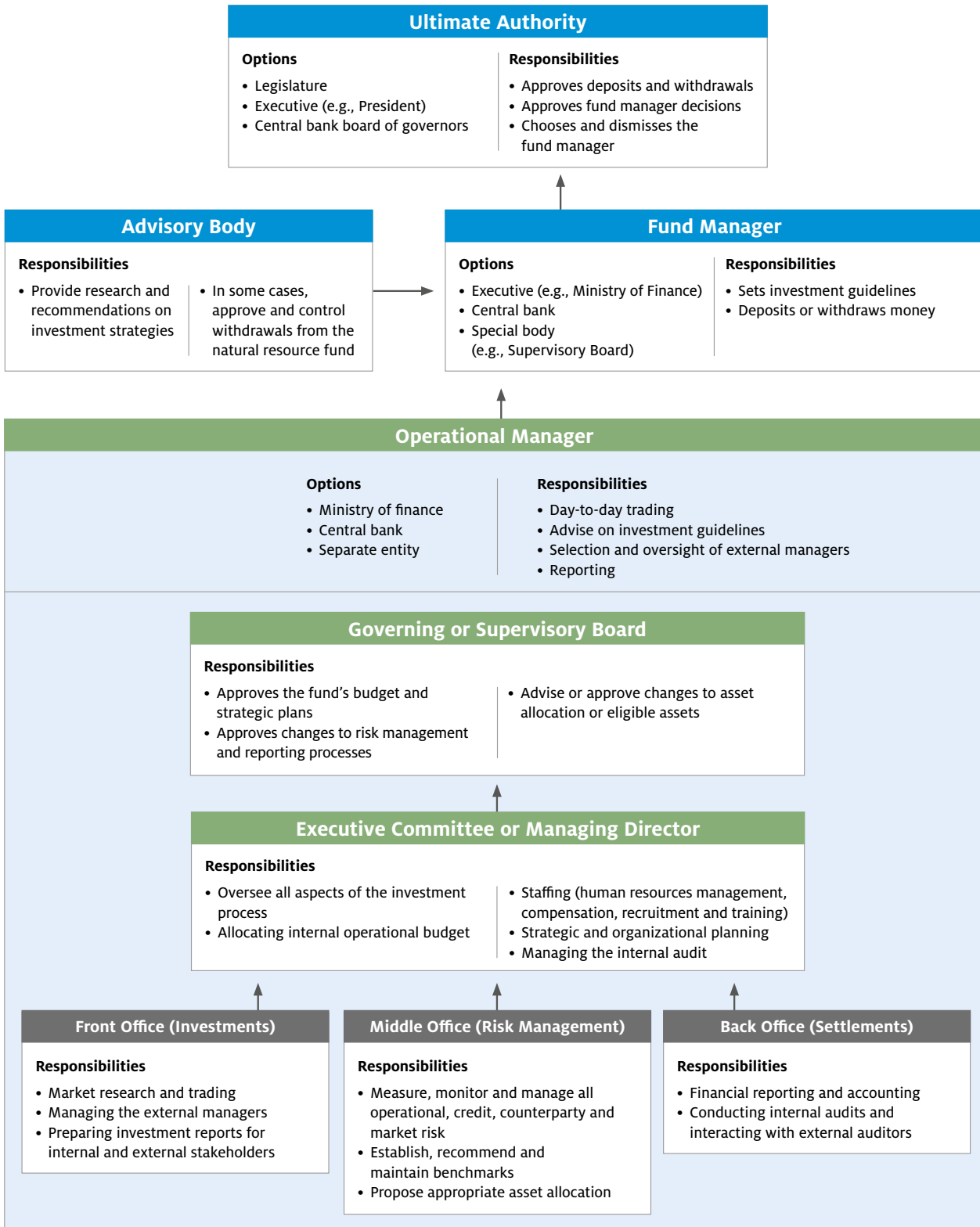
The structure of the fund lays out who inside and outside of the government makes decisions about the fund. Key roles required in a fund include the ultimate authority, fund manager, advisory body and operational manager. These roles are listed in figure 4. Generally the roles can be divided into three levels.

- **Ultimate authority:** Usually held with the legislature, executive branch or central bank board of governors, the ultimate authority approves deposits and withdrawals, approves fund manager decisions and chooses and dismisses the fund manager.
- **Fund manager:** Usually held by the executive branch (often the minister of finance), central bank or special agency, the fund manager sets investment guidelines and deposits and withdraws money from the fund.
- **Operational manager:** Usually held by someone in the ministry of finance, central bank or a separate entity, the operational manager is responsible for day-to-day trading, advises on investment guidelines, selects and oversees external managers, and reports on fund activities.

Countries vary greatly in how they have allocated these different roles within their existing structure. That said, researchers find funds most effective when the day-to-day management of the fund is done by politically independent, skilled actors with strong internal controls. The choice of where to house this day-to-day operational manager—whether as a unit within the central bank, a unit in the ministry of finance or as a separate entity—is context-specific. However, no matter how they are designed, effective management and organizational structures are key determinants of good fund governance of NRFs. In addition, strong codes of conduct and monitoring systems can help prevent misconduct by the fund’s executive and staff.

“Researchers find funds most effective when the day-to-day management of the fund is done by politically independent, skilled actors with strong internal controls.”

Figure 4. Model natural resource fund organizational structure



Source: Bauer, Andrew and Rietveld Malan, Institutional Structure of Natural Resource Funds (NRGI and Vale Columbia Center, 2013), 3.

NRF TRANSPARENCY

NRF transparency is necessary to promote efficiency, prevent fiscal crisis, improve policy coherence and allow for oversight actors to do their job effectively. To be considered transparent, a NRF must have clear roles and responsibilities for managers and policy makers, publicly available information, open decision-making processes, reporting and assurances of accurate information.

- **Defining of clear roles and responsibilities:** The roles and responsibilities of the key actors and institutions should be clearly defined well in advance.
- **Publicly available information:** Freedom to easily access information on managerial activities, financial flows in and out of funds, specific assets and returns on investments are key elements of natural resource fund transparency.
- **Open decision-making processes and reporting:** The government needs to give assurances to the general public that resource revenues are being used effectively to meet social and economic policy goals.
- **Assurances of integrity:** Data should meet accepted criteria of quality, and there should be oversight mechanisms in place.

“A NRF must have clear roles and responsibilities for managers and policy makers, publicly available information, open decision-making processes, reporting and assurances of accurate information.”

INDEPENDENT OVERSIGHT

Independent oversight is the supervision of government behavior. Such oversight is only possible when there is sufficient transparency for someone outside the fund’s operations to analyze the work of the fund. For NRFs, oversight bodies can encourage a government to follow its own rules, meet its own objectives and manage funds in the public interest. Who provides oversight varies from country to country but can include the legislature, the judiciary, regulatory agencies, external auditors, the media, civil society organizations or citizens. Oversight tends to be most effective when the oversight body has expertise in the topic under investigation, possesses the power or capacity to investigate, has access to information, holds enforcement power, and is integrated with the institutional environment.

The risks of poor oversight are drastic. In Libya, for example, the ex-dictator’s son, Saif al-Islam Gadhafi, had nearly full discretion to manage much of the fund’s approximately \$65 billion. The fund showed very disappointing results. Reports by government officials reviewing the fund’s management written after the fall of the regime found that in addition to investing with companies run by those close to the regime, the fund took very large investment risks and paid unnecessarily high transaction fees. The type of oversight provided by these reports during a new government could be provided during the investment process when there is a properly empowered independent oversight actor.

QUESTIONS TO ASK

- Does my country use a natural resource fund?
- What are the objectives of my country's natural resource fund? If my country does not have a fund, what objectives do I think would be most important to use a fund for?
- How is the fund in my country structured?
- What are the fiscal rules for withdrawal and deposits in my country?
- Where are the assets in our fund invested, and what are the rules for making decisions about investments?
- Can I readily access information about the roles of different people involved in the fund, the fund's assets and investments, and the fund's strategy? Do I trust this information?
- Does anyone provide oversight to the fund? If not, who do I think would be the optimal oversight actor?

ADDITIONAL RESOURCES

Bauer, Andrew (ed.), *Managing the public trust: How to make natural resource funds work for citizens* (NRGI and Vale Columbia Center, 2013), available at: <http://www.resourcegovernance.org/natural-resource-funds>.

Collier, Paul et al., *Managing Resource Revenues in Developing Countries*, IMF Staff Paper, Vol. 57, No. 1 (2010).

International Monetary Fund, *The Functions and Impacts of Fiscal Councils* (2013), available at: <http://www.imf.org/external/np/pp/eng/2013/071613.pdf>.

International Working Group of Sovereign Wealth Funds, *Sovereign Wealth Funds: Generally Accepted Principles and Practices* (2008), available at: <http://www.iwg-swf.org/pubs/eng/santiagoprinciples.pdf>.

Truman Sovereign Wealth Fund Scoreboard, available at: <http://piie.com/publications/pb/pb13-19.pdf>.

The Natural Resource Governance Institute, an independent, non-profit organization, helps people to realize the benefits of their countries' oil, gas and mineral wealth through applied research, and innovative approaches to capacity development, technical advice and advocacy.
Learn more at www.resourcegovernance.org

Subnational Revenue Distribution

Natural Resource Revenues in a Decentralized Context

KEY MESSAGES

- National governments often share the responsibilities of governing with local governments through a process of *decentralization*, including on natural resource governance.
- In many resource-rich decentralized countries, local governments receive resource revenues through either *direct payments* from companies or *resource revenue transfers* from national government.
- Deciding whether subnational governments should receive resource revenues is often a complicated policy debate involving competing objectives, including promoting national cohesion, interregional equity, effective national fiscal management, and optimizing resource exploitation over time and space.
- Timely, accessible revenue sharing is necessary for subnational governments to fulfill their functions.

“The central government should link revenue distribution to the expenditure responsibilities of local governments, and be proactive in building the capacity of local governments to manage these responsibilities.”

– Natural Resource Charter, Precept 7

WHAT IS SUBNATIONAL GOVERNANCE?

Among the 58 countries ranked in the Resource Governance Index, a measurement of the quality of governance in the oil, gas and mining sectors, 30 have systems in place that distribute resource revenues to *subnational governments*: that is, municipal, district, state or provincial governments. How, when, and how much revenue is acquired by the subnational governments varies from country to country. This reader discusses the relationship between national and subnational governments and the options national governments have for sharing or distributing revenue to them. This reader can be read in conjunction with the one on Subnational Revenue Management, which explains the challenges and opportunities subnational governments face when they receive these funds.

Countries often break up their government structure into smaller units to be able to better respond to needs across different geographic areas. In some countries, the government is organized through a process of *deconcentration*, where the national government appoints and stations officers at provincial or district levels. In *deconcentrated* countries, the national government sets the policies and makes decisions about how revenues are spent in provinces, districts and cities. Other

This reader is intended for use in conjunction with Precepts 5, 7 and 8 of the Natural Resource Charter.

countries have *decentralized* systems where the subnational government body selects its own leaders and has the authority to make policy decisions. While there is a general trend of *decentralization* throughout the globe, the extent of decentralization varies from country to country. For example, in Zambia the provincial level of government is politically *deconcentrated*, appointed by the national government, but the district level is partially *decentralized*. The district governments in Zambia can collect their own taxes, but they must get national approval for all development and spatial plans. In contrast, Indonesia is famous for its rapid decentralization, which gave more than 400 districts the power to collect taxes, save revenues and draft medium-term plans.

WHAT EXTRACTIVE REVENUE STREAMS COME TO SUBNATIONAL GOVERNMENTS?

In many resource-rich countries that are decentralized, subnational governments receive some revenues from extractive industries. These funds primarily come through either *direct payments* from companies to subnational governments or *transfers* from national to subnational governments.

Direct payments: A company's direct payment to a subnational government may be the result of contractual obligation, national law or local regulation. For example, in Argentina, Australia and Canada, provincial governments collect a royalty from mining companies. Subnational governments in Indonesia and Philippines collect fees over mineral licenses they issue. In Peru, until recently, mining companies set up a social fund at the local level that was overseen by subnational governments.

Resource revenue transfers: *Resource revenue transfers* are revenues from extraction companies collected by the national government that are shared with the district, provincial or municipal governments in extraction areas.

How much is transferred to which local area varies greatly from country to country. Some countries provide resource-rich areas with a percentage of the revenues that are paid to the national government from extraction in the territory. Other countries use a *statutory formula* to distribute resource revenues, with a calculation of each area's share based on several characteristics, such as population size, per capita income or revenue collection effort.

In addition to resource revenue transfers, the national government may transfer resource revenues to subnational governments through regular *intergovernmental transfers*. The amount that is distributed to subnational governments varies from country to country. Some are based on formulas and some on budget proposals. While these are not classified as resource revenue sharing, the funds may be subject to similar challenges of volatility as resource revenue transfers.

“In Argentina, Australia and Canada, provincial governments collect a royalty from mining companies.”

Case study: Indonesia

Indonesia's "big bang" decentralization of 2001 left subnational governments with unprecedented power to collect and expend revenues, and new responsibility to provide services to their citizens. Those designing the revenue sharing framework wanted to balance national unity with local control. After years of dictatorship, many of the resource-rich regions were among the least developed, and there was concern that the diverse archipelago could quickly disunify. In response, the government established multiple means of sharing resource revenues with the districts and provinces. Two regions, Aceh and West Papua, with large natural-resource wealth and a history of conflict were given 70 percent of all oil revenues in their regions. The remaining resource-rich local governments receive considerably less at 15.5 percent of the government's profits from oil: 6.1 percent to the producing district, 3.2 percent to all other districts in the producing province, and 3.2 percent to the producing province. While initially resource-rich districts and provinces had few resources to manage the extra funds, today many have employed advance revenue management tools including stabilization and savings funds, transparency mechanisms and development planning.

DESIGNING RESOURCE REVENUE SHARING POLICY

Political scientists and economists often debate about whether natural resource revenue sharing is the most efficient or effective use of natural resource revenues. Public sector economists, often concerned with the unpredictability of resource revenues and the limited capacity of local governments, tend to recommend central government control over natural resource revenues coupled with intergovernmental transfers based on equalization formulas. Others emphasize the local political, environmental and economic impact of natural resource extraction. They suggest that resource revenues should be shared to address negative local impacts, address concerns of ownership of resources and promote central-district harmony. Some argue that failure to share revenues with subnational governments could increase the possibility for conflict.

“Political scientists and economists often debate about whether natural resource revenue sharing is the most efficient or effective use of natural resource revenues.”

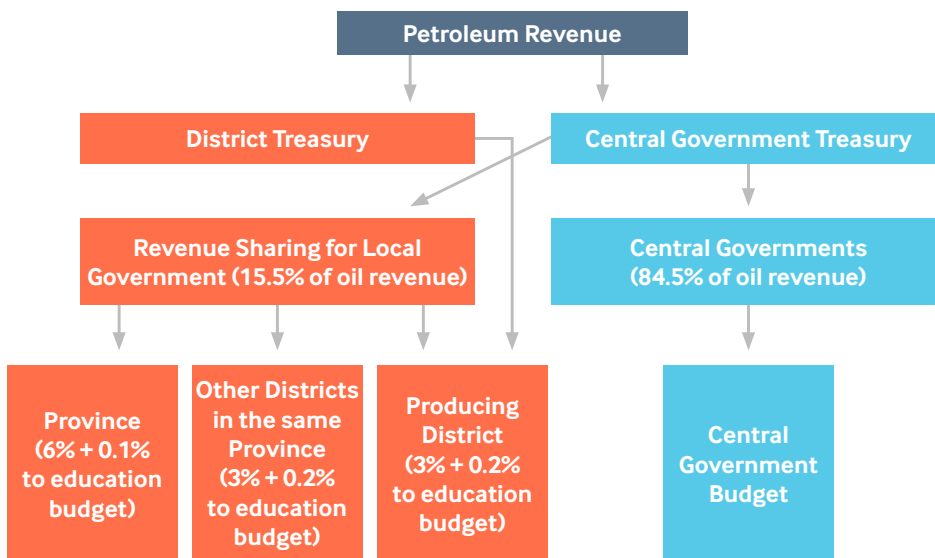


Figure 1. Indonesia's petroleum revenue sharing regime

Source: Bauer, Andrew, *Subnational Oil, Gas and Mineral Revenue Management (NRGI, 2013)*

Governments respond to these tensions with a variety of policies. Figure 2 provides a snapshot of the variety of revenue sharing schemes among different countries. Whatever revenue sharing scheme a country decides to implement, timely and transparent sharing is necessary for the local government to be able to use the revenues most efficiently. As discussed in the subnational revenue management brief, transparency can also help the subnational government project revenues owed and plan better for medium and long-term development.

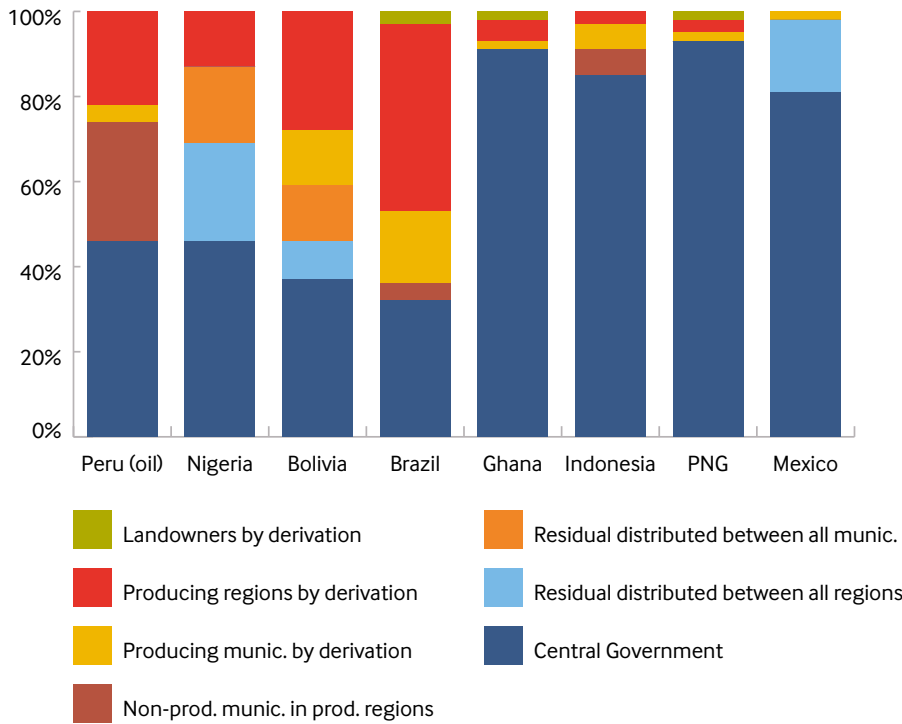


Figure 2. Extractive industries revenue distribution at the subnational level

Source: Matteo Morgandi, *Extractive Industries Revenues Distribution at the Sub-National Level (NRGI, 2008)*

QUESTIONS TO ASK:

- How does the national government share power with local governments in my country?
- Do subnational governments have access to natural resource revenues in my country? If so, how is their share calculated?
- Do the resource-rich regions in my country feel like they receive a “fair” share of the benefits from natural resource extraction? Do non-resource-rich regions feel the same?
- Is there enough transparency in my country that the subnational governments can understand and predict the potential revenues coming to their area?

ADDITIONAL RESOURCES

Venugopal, Varsha, and Manley David, *Subnational Revenue Sharing* (forthcoming in 2015).

Bauer, Andrew, *Subnational Oil, Gas and Mineral Revenue Management* (RWI, 2013), available at: http://www.revenuewatch.org/sites/default/files/RWI_Sub_Oil_Gas_Mgmt_EN_rev1.pdf

Morgandi, Matteo, *Extractive Industries Revenues Distribution at the Sub-National Level* (RWI, 2008), available at: <http://www.revenuewatch.org/publications/extractive-industries-revenues-distribution-subnational-level>

Pellegrini, Matteo, and Venugopal, Varsha, *From Conflict to Collaboration: Lessons learned from RWI interventions in oil, gas, and mineral producing areas* (RWI, 2013), available at: http://www.resourcegovernance.org/publications/fact_sheets/conflict-collaboration

The Natural Resource Governance Institute, an independent, non-profit organization, helps people to realize the benefits of their countries' oil, gas and mineral wealth through applied research, and innovative approaches to capacity development, technical advice and advocacy.
Learn more at www.resourcegovernance.org



Oil, gas and mining for development

Subnational Revenue Management

Improving Local Development Through Resource Wealth

KEY MESSAGES

- Subnational governments share many of the same challenges of managing natural resource wealth as national governments, with the added challenges of decentralization constraints, high potential for conflict, migration, and environmental and social impacts.
- Subnational governments can address volatility by using fiscal rules to limit distributions to the annual budget and instead distribute revenues to funds or managing debt.
- Medium-term development planning is a key tool for subnational governments to take advantage of the limited nature of natural resource revenues and the direct expenditures from companies.
- In order for subnational governments to manage their natural resource revenues optimally, they must have access to information from the national government and companies about revenue payments, sharing formulas and production projections.

“Resource management requires maximizing the costs for affected communities, while enhancing the benefits.”

– Natural Resource Charter,
Precept 5

WHY SUBNATIONAL REVENUE MANAGEMENT?

Many countries decide to distribute some of their natural resource revenues to subnational governments. As discussed in the subnational revenue distribution reader, the process and amount of revenues shared with subnational governments varies greatly from one country to the next. This reader discusses how subnational governments can manage these revenues when they are received and highlights some of the special challenges that subnational governments face.

WHAT ARE THE CHALLENGES OF SUBNATIONAL REVENUE MANAGEMENT?

When subnational governments receive these revenues, they have the opportunity to use them to invest in the long-term economic and social development of their community. Subnational governments face many of the same revenue management challenges as do national governments. Resource-related revenues tend to be volatile and large, posing risks of crowding out other industries and resulting in inefficient budgeting practices. To add to the challenge, many subnational governments have fewer powers and skills than national governments to react to these challenges.

This reader is intended for use in conjunction with Precepts 5, 7 and 9 of the Natural Resource Charter.

Some of the additional challenges subnational governments can face include:

- **Decentralization constraints.** The laws that govern *decentralization* of power—the way power and responsibility is shared between national and local governments—can limit the options a local government has to respond to known extractive-industries challenges. For example, *fiscal* constraints on subnational governments—rules that dictate how much the local government can spend or save and for what types of projects—often make it less compelling or impossible to use some of the expenditure-smoothing tools available at the national level, such as savings funds or the ability to borrow. For example, if a subnational government has to return any unspent revenues each year, it cannot try to build a reserve to cushion the highs and lows of extractive prices. Some subnational governments are also directed by national governments to use their resources on certain types of projects, such as infrastructure, which may make it difficult to plan for maintenance of those projects. Similarly, subnational governments may be limited in the tools they have to respond to breaches of social or environmental impacts.
- **Variety of revenue sharing and collection schemes.** Revenue streams for subnational governments are often quite complex, especially when they involve revenue sharing from the national government. Subnational governments often do not have direct access to necessary information about revenue streams or resource projections to create accurate financial forecasts. To be successful at revenue collection, the subnational government must monitor a variety of potential revenue streams.
- **Dealing with high community expectations.** At a subnational level, community expectations are particularly high once natural resources are discovered. Local communities will directly observe the initial infrastructure changes as a result of exploitation and often have expectations for a quick benefit. These expectations can put additional pressure on local governments and company corporate social responsibility (CSR) programs to respond with more popular but less strategic programs, such as large sports venues.
- **Discontinuity between CSR and local budget timing, planning and implementation.** In addition to paying taxes and royalties, extractive companies will often financially contribute to the community through a social investment program. These social programs are often disconnected from the local authorities' budgeting and planning cycle. As a result, it is not uncommon to see, for example, a new school in a resource-rich community that goes unused for years because the local government has not included or cannot include the additional payroll costs in its annual budget.
- **Technical capacity to forecast, plan, budget and lead multi-stakeholder deliberative processes.** While the technical capacity of subnational governments is often less advanced than national governments, this is particularly so in terms of natural resource governance. As noted above, managing the influx and volatility of natural resource revenues is a challenging problem even for advanced economists and requires personnel with an advanced understanding of these issues. Further, the particular challenges of natural resource wealth necessitate hosting multi-stakeholder dialogues to build consensus and ensure that citizens are consulted and informed of decisions made.

“Subnational governments often do not have direct access to necessary information about revenue streams or resource projections to create accurate financial forecasts.”

- **Lack of experience anticipating and managing social and environmental impacts.** Subnational governments often lack the technical knowledge and understanding to predict and manage harmful impacts from extraction.
- **Lack of local market capability to capture local content benefits.** Local governments often do not have the technical knowledge or decision-making power to magnify the economic gains of extractives in the local economy. Provisions for local economic impact, known as *local content* terms, are often negotiated at the national level, either for each contract or in a national legal framework. If these negotiations take place at the national level, they may not include considerations about local priorities, the capacity necessary to take up the opportunities, or the need to create an enabling environment. For example, a road or a port built for the company could also benefit the local economy if done with both goals in mind.
- **Poorly organized civil society.** At the national level, organized and technically competent civil society has become a strong check in some resource-rich countries. Civil society at the subnational level often lacks the technical and institutional capacities necessary to monitor and participate in decision making.

TOOLS FOR SUBNATIONAL REVENUE MANAGEMENT

Subnational governments have essentially four choices when facing a revenue windfall: increase spending, decrease taxes, pay down public debt or save revenues. When revenues unexpectedly decline, they can cut spending, increase taxes, borrow from financial institutions, draw on public savings or ask the central government for financial assistance. Of course, not all subnational governments have all of these options available to them.

Smoothing expenditures. Subnational governments can lower the impact of volatile revenues by decoupling the revenues from expenditures in the budget through rules that limit spending, called *fiscal rules*. Subnational governments can create fiscal rules that require limitations on spending within the annual budget and distribute the remaining revenues to savings funds or managing public debt.

Development planning. One means of improving spending outcomes, that is, the benefits experienced by the community, is by creating detailed, costed and comprehensive development plans. These multi-year plans can help governments transition toward a diversified economy and overcome development bottlenecks. Development planning is also an opportunity to align subnational government spending with spending by other actors, such as extractive companies and the national government. The *medium-term expenditure framework* (MTEF) is a process that links medium-term development planning to the annual budget. The MTEF can help subnational governments be more disciplined in following the development plan during the annual budget cycle.

Investing in investment process. One of the major challenges facing subnational governments is having the bureaucratic capacity and economic size to invest resources efficiently. Resource-rich governments can invest in qualified personnel who can assist with the planning, budgeting and expenditure-monitoring process.

More information about revenue management tools can be found in the revenue management reader.

“The medium-term expenditure framework can help subnational governments be more disciplined in following the development plan during the annual budget cycle.”

Case study: Peru

Subnational governments in the Piura and Arequipa regions of Peru receive revenue distributions from the national government that represent a share of the oil and mining revenues in their region. Though the revenue is distributed each month, for years subnational government officials did not know how much to expect during the next month or whether what they were receiving was appropriate. The regional governments in Piura and Arequipa set out to change this by developing revenue forecasts. First, government officials, with help from civil society researchers, investigated the components of revenue transfers from the national government. Once they understood the variables involved in the revenue transfers and how commodity prices were applied, they could use publicly available information from the national government to create revenue forecasts. Arequipa's first attempt at revenue forecasting was only 1 percent different from the amount received in the forecasted year. The success of forecasts in Piura and Arequipa has attracted attention from other regional governments in the country.

TRANSPARENCY

In order for subnational governments to effectively plan for the management of natural resource revenues, they must have access to timely, accurate, relevant information from the national government and extractive companies.

One challenge for subnational governments is to understand the amount and timing of potential natural resource revenues. *Revenue projections*, estimates of how much revenue the subnational government expects to receive over time, can help them anticipate space for development planning and the need to adjust for volatility. In order to create accurate revenue projections, subnational governments must have information about the revenue-sharing formula, company payments to the national government, contract terms, production volumes and costs. When this information is available to subnational governments in a timely manner, they can plan for how to manage these revenues and confirm whether the revenues they are receiving are appropriate.

“In order to create accurate revenue projections, subnational governments must have information about the revenue-sharing formula, company payments to the national government, contract terms, production volumes and costs.”

QUESTIONS TO ASK:

- Do subnational governments have access to natural resource revenues in my country? If so, what is the source?
- How does the power of subnational governments to manage natural resource revenues differ from that of the national government in my country?
- What tools do subnational governments in my country use to address the volatility and finite nature of the extractive resources?
- Are subnational medium term development plans costed? Do they benefit from participation of the community?
- Is all the necessary information available for subnational governments to understand what revenues they should be receiving?

ADDITIONAL RESOURCES

Bauer, Andrew, *Subnational Oil, Gas and Mineral Revenue Management* (RWI, 2013), available at: http://www.revenuewatch.org/sites/default/files/RWI_Sub_Oil_Gas_Mgmt_EN_rev1.pdf.

Morgandi, Matteo, *Extractive Industries Revenues Distribution at the Sub-National Level* (RWI, 2008), available at: <http://www.revenuewatch.org/publications/extractive-industries-revenues-distribution-subnational-level>.

Pellegrini, Matteo, and Varsha Venugopal, *From Conflict to Collaboration: Lessons learned from RWI Interventions in oil, gas, and mineral producing areas* (RWI, 2013), available at: http://www.resourcegovernance.org/publications/fact_sheets/conflict-collaboration.

The Natural Resource Governance Institute, an independent, non-profit organization, helps people to realize the benefits of their countries' oil, gas and mineral wealth through applied research, and innovative approaches to capacity development, technical advice and advocacy.
Learn more at www.resourcegovernance.org

Local Content

Strengthening the Local Economy and Workforce

KEY MESSAGES

- Local content is the value that an extraction project brings to the local, regional or national economy beyond the resource revenues.
- Countries can encourage local content through requirements and targets written in national laws and individual contracts.
- Producing strong local content results can be very difficult because of the technical requirements of the industry.
- Companies should have open and transparent procurement procedures to avoid the opportunity for corruption and cronyism.
- Governments wanting to improve local content need to understand associated costs and challenges such as potential loss in company profits resulting in reduced revenue, inflation and corruption.

“Extractive projects also have the potential to generate benefits for local communities through employment and the demand for goods and services.”

– Natural Resource Charter, Precept 5

WHAT IS LOCAL CONTENT?

Many resource-rich countries make efforts to improve the local economy by leveraging linkages to extractive projects, beyond the revenues these generate. The value brought to the local, regional or national economy from an extraction project is referred to as the *local content*. A push toward local content strives to ensure that a company is hiring local labor and procuring local goods and services from the host country. This reader discusses how governments try to promote local content and some of the challenges they face in fostering lasting benefits.

HOW IS A LOCAL CONTENT POLICY IMPLEMENTED?

What qualifies as local content often varies from country to country. For example, some countries refer to *national content* to emphasize that the inputs can be from anywhere in the country, while others seek to promote inputs from the resource-rich region specifically. There are often additional questions about what qualifies as a local business—is it enough to have a certain percentage owned by nationals? Must it be registered in the country? What percentage of the workforce must be local? Some countries are very explicit about these mandates; others are not.

This reader is intended for use in conjunction with Precepts 5 and 10 of the Natural Resource Charter.

To encourage local content, countries often create requirements for extraction companies to include local labor, products or companies. Governments use a variety of tools to reach their goal of benefiting the local economy through the extraction project, including:

- **Quotas**, embedded in laws, regulations or contracts, are provisions to require companies to award a certain percentage of hires, contracts or equity ownership to local companies or professionals.
- **Training program requirements** or incentives, are aimed at requiring or encouraging foreign companies to build the skills of the domestic workforce.
- **Public education initiatives**, wherein the state opens training centers, establishes programs or organizes overseas scholarships to build a cadre of expertise in sectors with strategic links to oil and minerals.
- **Incentives for small business development**, including fostering better access to credit for small business owners or opening business incubation centers.
- **Processing and production of derivative products**, such as refining crude oil or smelting minerals, which can capture significant economic benefits if done domestically but also can be expensive and complicated to construct.

Local content requirements in a country can be implemented on a project-by-project basis through contracts or universally through national legislation. Countries vary on the level of specificity of local content requirements and whether they include provisions for employment, training or ownership. A few examples:

- The **Afghan Amu Daya Basin contract** requires that the “contractor agrees to as far as possible train and employ qualified Afghan nationals. . .and. . .will undertake the schooling and training. . . The contractor will require the contractors and subcontractors to do the same.”
- **Timor-Leste’s production sharing contract for Area A** stipulates that “the Contractors shall draw to the attention of suppliers based in Timor-Leste, in such a manner as the Ministry agrees, all opportunities for provision of good and services in petroleum operations.”
- The **Ghana-Tullow agreement** provides that “in the acquisition of plant, equipment, services, and supplies. . . [the] contractor shall give preference to materials, services, and products produced in Ghana. . .if [they]. . .meet standards generally acceptable to international oil and gas companies. . .”
- The **Indonesian Bill on Mineral and Coal Mining of 2008** requires all companies to process and refine mining products in Indonesia.
- The **Nigerian Oil and Gas Content Development Act of 2010** has provisions to enhance local participation in all aspects of oil operations, including the following: 65 percent of divers in offshore energy projects must be Nigerian; 60 percent of steel ropes used in projects must be made locally; all contracts awarded in excess of \$100 million must include a “labor clause,” mandating the use of minimum percentage of Nigerian labor or the use of indigenous companies of a minimum size.

While some the provisions are very specific, they are often lax enough to allow the company the option of utilizing outside resources if labor or service needs cannot be met locally. This brings to bear the need for a government that wants to promote local content to foster an enabling environment for local labor forces and business to have the knowledge and skills to be active participants in the extractive economy. The freedom to deviate from the requirements when standards are not met also creates a challenge for monitoring a company’s compliance with local content targets.

WHAT MAKES LOCAL CONTENT DIFFICULT

Extractive industries have an unusually high capital to labor ratio compared with other industries. This means that they hire fewer employees per investment dollar than most businesses. Though there may be very high expectations for the extraction site itself to employ many individuals, the nature of the business is such to have few employees.

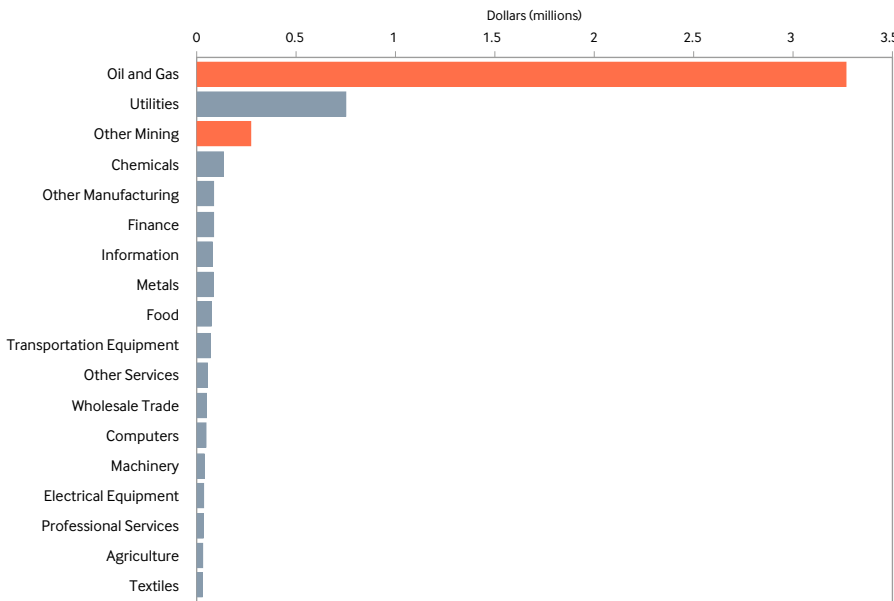


Figure 1. Capital-to-labor ratios in major industries (amount of money invested per employee by US businesses operating overseas)

Source: Ross, Michael, *The Oil Curse* (Princeton UP, 2012).

Further, the requirements for many of the extraction jobs and related services are extremely technical. For example, Tanzania has some experienced welders. However, when BG, British multinational oil and gas company, was looking for welders to help with the construction of its large offshore gas platform, it found few who could weld the specific types of piping necessary for the job. Existing welders require advanced training to be able to meet the needs of the company.

Even nontechnical jobs such as food production require a level of capacity that may not exist in the community. When there are farms near the extraction site, for example, it may seem reasonable to expect that the company could order food from the farmers. From the extractive company’s perspective, however, it needs to be able to order food that is predictably at a high level of quality. Local farmers may need support to bring their farms to the capacity to meet the quality and quantity requirements for the company to use their produce. Near the Vale mine in Tete, Mozambique, nonprofit organizations have organized groups of farmers to provide chickens and other produce to the mine’s cafeteria. While this step has helped small farmers interact with the mine, the local price for chicken has skyrocketed, and the mine still purchases much of its food from outside the country.

Generally, countries face a question about the benefit or sustainability of investing in local content. Because extractive resources are finite, it can be detrimental to create more economic focus on the extractive industries. Proponents of economic diversification suggest using local content provisions to develop a workforce with transferable skills.

Opening the door for corruption?

One challenge with local content is that it can open the door for corruption and elite capture of an industry. For example, in Nigeria, requirements to partner with local companies resulted in corrupt schemes wherein political elites created shell companies to profit from the law. Similarly, many suspect that the motivation for the national smelting requirement in the 2008 Indonesia mineral law stemmed from politicians seeking financial benefit for their smelting plants. Countries can mitigate the potential of corruption in local content by requiring transparent procurement processes and making information easily available to oversight actors, such as civil society and parliamentarians. Compliance with requirements to disclose the beneficial owners of extractive companies and subcontractors, such as those being piloted under the Extractive Industries Transparency Initiative, will also help reduce corruption and elite capture of local content opportunities.

QUESTIONS TO ASK

- What kind of local benefits could be offered by the extractive industry in my country?
- What kind of local benefits *are* being offered by the extractive industry?
 - Is there a local content maximization strategy in place? That is, is a relatively higher priority being given to the employment of locals and locally based firms?
 - Would such a strategy be appropriate?
- Are there mechanisms in place to track progress in meeting local content targets?

ADDITIONAL RESOURCES

Estevez, A. M., et al., *Local Content Initiatives: Enhancing the subnational benefits of the oil, gas and mining sectors* (RWI, 2013), available at: http://www.resourcegovernance.org/sites/default/files/RWI_Sub_Enhance_Benefits_EN_20131118.pdf.

Tordo, Silvana et al., *Local Content Policies in the Oil and Gas Sector* (World Bank, 2013), available at: http://books.google.co.uk/books?id=tX4xAAAAQBAJ&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false.

The Natural Resource Governance Institute, an independent, non-profit organization, helps people to realize the benefits of their countries' oil, gas and mineral wealth through applied research, and innovative approaches to capacity development, technical advice and advocacy.
Learn more at www.resourcegovernance.org

Extractives-Linked Infrastructure

Exploring Options for Shared Use of Infrastructure Projects

KEY MESSAGES

- Extractive industries often require investment in large infrastructure projects (e.g., ports and railways) to be able to successfully bring the resource to market.
- Unless there is active intervention by the government, *enclave* infrastructure investments may only benefit the extraction site, missing the opportunity to leverage economies of scale in the sector or meet the development needs of the community.
- In order to be successful, the possibility of shared use of infrastructure should be considered in the early stages of the extractive project.
- Governments also often use resource revenues to invest in large infrastructure projects, which must be closely monitored to avoid waste.

“Extraction projects may also require substantial infrastructure which can provide significant benefits in regions where the infrastructure is built. To enhance these benefits, the government, in discussion with companies, should consider making the infrastructure open to multiple users.”

– Natural Resource Charter, Precept 5

EXTRACTIVE INDUSTRIES AND INFRASTRUCTURE

Mining, oil and gas projects often require large infrastructure support to extract the product and get it to its final destination. These projects include roads or rail transportation, water systems, power, telecommunications, ports and pipelines. Many of the developing countries where extraction takes place have infrastructure gaps that can make it more challenging to transform resource wealth into long-term development. This reader discusses the impact of infrastructure projects by extraction companies and the use of natural resource revenues to facilitate new infrastructure projects.

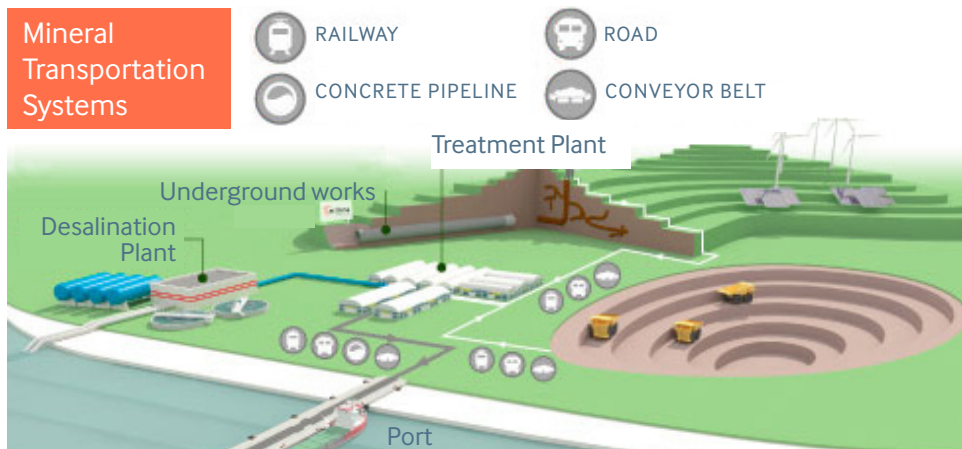


Figure 1. Types of mining infrastructures

Source: Courtesy of Acciona Infrastructure, available at: <http://www.acciona-infrastructure.com/activities/mining.aspx>

This reader is intended for use in conjunction with Precepts 5 and 9 of the Natural Resource Charter.

INFRASTRUCTURE NECESSARY FOR EXTRACTION

When the infrastructure does not exist, mining companies may find it more efficient to build what they need to extract the minerals and get them to market. This can lead to an *enclave* system of development, in which mining companies make large infrastructure investments that will only suit their needs. In Sierra Leone, for example, all mines built their own power generating systems without linking to either the national electric grid or sharing that electricity with the surrounding communities. In Pilbara, Australia, three mining companies built separate railways in a close geographic space.

Developing infrastructure requires multiple roles. The *owner* of the infrastructure has legal ownership of the property and physical elements. The *operator* controls who has access to the infrastructure during what times and at what cost. The *investor* funds the construction, and sometimes the operation, of the infrastructure. A *regulator* can monitor the use of the transportation system to ensure it is in compliance with the laws and agreements. Either the company or the state can play some or all of these roles, depending on the context.

WHAT IS SHARED USE?

Shared use infrastructure refers to the opportunity to have mining-related infrastructure meet more than one objective. *Multi-user* infrastructure can increase the *economy of scale* of a particular infrastructure project when several mining companies in a region use a particular infrastructure investment. For example, a multi-user approach would encourage the three mining companies in Pilbara to share a railway instead of constructing three separate ones. *Multi-purpose* projects, such as the rail line built through the Nacala corridor in Africa, combine uses for non-mining purposes. In the Nacala corridor, passenger cars will travel on the same rail lines as coal cars. *Economies of scope* can be achieved when outputs of one type of infrastructure can be used as inputs for another, such as placing telecommunication lines along transportation tunnels.

In a 2013 report, McKinsey Global Institute estimated that as much as \$2 trillion of extractive industries' infrastructure investments could benefit from some form of shared use between 2013 and 2030. It estimates that nearly 70 percent of infrastructure investment could be multi-user, and the remaining 30 percent could be multi-purpose.

CHALLENGES FOR SHARED-USE PROJECTS

While shared-use projects may sound attractive, the economic advantage is strongly dependent on the specifics of the project. As research from the Columbia Center on Sustainable Investment shows, both the costs and the returns from shared use can range significantly, depending on the type of infrastructure and the type of industry it was developed for. In other words, there can be substantial costs attached to a shared-use approach that must be considered against the potential benefits.

On the other hand, an *enclave* structure can be extremely logical from an investor/operator perspective, especially where the coordination costs for sharing the infrastructure are very high or where coordination reduces the competitive advantages of the operation. In some cases, an extractive company may view acting as the sole operator and user of infrastructure as a competitive advantage for gaining future concessions in the same area. Sharing one type of transportation infrastructure could

“While shared-use projects may sound attractive, there can be substantial costs attached to a shared-use approach that must be considered against the potential benefits.”

also increase demand and associated costs for another type of infrastructure. For example, sharing a railway may increase demand at a port and could cause bottlenecks if the state or port operator cannot coordinate effectively. From the perspective of the state, enclave structures could exacerbate the problem of stranded assets and lead to decreased efficiency in minerals exploitation. The lack of a shared-use agreement could also limit the economic and development potential of the region, and lead to a perception of social exploitation.

Development planning across sectors can mitigate some of the risks by identifying multiple opportunities, users or purposes before contract negotiations or tendering the concession. Once there is a single user for infrastructure, it is more challenging to make it multi-functional or multi-user friendly. By planning ahead, governments can assess other options, such as negotiating for higher tax revenues to invest in public infrastructure projects. It should be noted that to the extent that shared infrastructure creates additional costs to the operator, the operator will try to negotiate some trade-offs, possibly seeking concessions on the applicable fiscal regime.

When considering a shared-use project, countries need to decide modalities for ownership, operations, maintenance and financing. The options are for the mining company, the government, or a third party to own and operate the infrastructure. The benefit of the mining company owning the infrastructure is that the company can absorb the large up-front costs and often has a strong incentive to keep costs low while providing reliable infrastructure and services. On the other hand, there is a risk when extraction companies monopolize the infrastructure that they will assert their power to limit access to other users. A middle-road option, *build-operate-transfer (BOT)*, allows the government to retain ultimate ownership (after a time) but leverages financing from the company. A strong government regulator can play a role ensuring that multiple actors can access the infrastructure equitably.

“Once there is a single user for infrastructure, it is more challenging to make it multi-functional or multi-user friendly.”

Case study: Nacala corridor

Extractive companies have recently discovered and started to extract large finds of coal in Mozambique. One of the largest mines, operated by Vale, is in Moatize, 900 kilometers from the nearest port, in Nacala. The logistical challenges of getting coal to market from this remote location have impacted the profitability of the mine and left large stores of coal waiting outside the mine. With financial support from the International Finance Corporation, Vale, the government of Mozambique and the government of Malawi have collaborated to build a railway from the mine through part of Malawi. The project is a combination of building new railways and rehabilitating existing infrastructure. At its peak, Vale is expected to send as much as 14 coal trains along the railway each day. In addition, passenger cars will continue to operate along the same railroads, though less often than previously. At the end of the railway in Nacala, Vale, the government and other partnering companies have built a large new port facility to remove the coal from the railway and put it onto boats. The operation of the railroad and port will be managed by a separate entity owned in part by Vale, the government of Mozambique and other investors. The operator is currently outlining criteria that local businesses from other industries must meet to have their goods transported on the railway. Other large coal mines near Moatize do not have access to the rail line at this time.

USING RESOURCE REVENUES FOR INFRASTRUCTURE

Countries with infrastructure gaps often aim to use their natural resources revenues to build better infrastructure conduits. As discussed above, countries can even plan to build infrastructure by not requiring shared use and instead negotiating for a higher tax rate. Once the government collects the resource revenues, they can be distributed through the budget or natural resource funds to infrastructure projects. When Malaysia discovered oil in the early 1970s, the government prioritized funding infrastructure projects (and education) with its natural resource revenues. Over the subsequent decades, it allocated large percentages of its resource revenues to roads, bridges and public transportation in the hope that these investments would provide the operating environment for a diverse economy and connect remote areas to the economy.

“Resource revenues can be distributed through the budget or natural resource funds to infrastructure projects.”

When countries choose to finance their infrastructure directly through higher taxes or royalties, there can be other challenges. Large public infrastructure projects are notorious sources of corruption and leakage. Governments have found some success by creating transparent budgets and using open, competitive procurement processes. The visible, public nature of these projects can create strong opportunities for civil society oversight and monitoring. Transparent monitoring programs, such as the Construction Sector Transparency Initiative (COST), can be effective in reducing the risk associated with these projects.

As the resource management reader discusses, investing in large infrastructure projects can create other economic challenges. When the *absorptive capacity* of the economy is weak, large investments of foreign funds can lead to inflation, potentially harming other areas of the economy.

QUESTIONS TO ASK

- What kind of infrastructure is the extractive industry developing in my country? Is any of that infrastructure shared use?
- What is the extent of the infrastructure gap in my country?
- Are tax revenues being reinvested in infrastructure development? If so, who is overseeing how they are spent and monitoring the quality of the projects?
- Are measures in place to ensure efficient coordination between infrastructure users?
- Are there regulations in place addressing the long-term implications of the shared infrastructure?

ADDITIONAL RESOURCES

Further reading

McKinsey Global Institute, *Reverse the curse: Maximizing the potential of resource driven economies* (2013), available at: http://www.mckinsey.com/insights/energy_resources_materials/reverse_the_curse_maximizing_the_potential_of_resource_driven_economies

Toledano, Perrine et. al, *A Framework to Approach Shared Use of Mining-Related Infrastructure* (Vale Columbia Centre on Sustainable International Investment, 2014), available at: <http://ccsi.columbia.edu/work/projects/a-framework-to-leverage-mining-related-infrastructure/>

World Bank, *EI Sourcebook: Public Infrastructure and Mining: A Good Practice Note* (updated August 2013), available at: <http://www.eisourcebook.org/cms/Sept%202013/Good%20Practice%20Note%20for%20Public%20Infrastructure%20and%20Mining%20-%20revised%202013%20August%2013.pdf>

COST, *Transparency and accountability in the construction sector* (April 2011), available at: <http://www.constructiontransparency.org/documentdownload.axd?documentresourceid=46>

The Natural Resource Governance Institute, an independent, non-profit organization, helps people to realize the benefits of their countries' oil, gas and mineral wealth through applied research, and innovative approaches to capacity development, technical advice and advocacy.
Learn more at www.resourcegovernance.org



Oil, gas and mining for development